



Meetings are held at the
Ilwaco Community Building Meeting Room
158 First Ave North in Ilwaco, WA

**CITY OF ILWACO
CITY COUNCIL MEETING**

**Monday, September 8, 2014
6:00 p.m. REGULAR COUNCIL MEETING
AGENDA**

A. Call to order

B. Flag Salute

C. Roll Call

D. Approval of Agenda

E. Consent Agenda

All matters, which are listed within the consent section of the agenda, have been distributed or made available for review to each member of the council prior to the meeting. Items listed are considered routine and will be enacted with one motion unless a council member specifically requests it to be removed from the Consent Agenda to be considered separately. The staff recommends the approval of the following items:

1. Approval of Minutes (TAB 1)

- a. August 25, 2014, Regular meeting

2. Claims & Vouchers (TAB 2)

a. Checks: 36915 to 36923 + Electronic	\$32,646.33
b. Checks: 36924 to 36974	<u>\$66,095.20</u>
GRAND TOTAL:	<u>\$98,741.53</u>

F. Reports

- 1. Staff Reports (TAB 3)**
 - a. Police Chief's Report
- 2. Council Reports**
- 3. Mayor's Report**

G. Comments of Citizens and Guests Present

At this time, the mayor will call for any comments from the public on any subject not on the agenda. Please limit your comments to five (5) minutes. The City Council does not take any action or make any decisions during public comment. To request an item be added to a future agenda, please contact the city clerk for the council rules of procedure for agenda items.

H. Business

I. Discussion

1. **104 Spruce St LLC** (TAB 9) –*Forner & Karnofski*
2. **Prohibiting Camping in Public Places** (TAB 10) –*Jensen*
3. **City Surplus** (TAB 11) –*Cassinelli*
4. **City of Ilwaco Developer Standards** (TAB 12) –*Cassinelli*
5. **Application for Economic Opportunity Grant for Port of Ilwaco Cold Storage Project** (TAB 13) –*Cassinelli*

J. Correspondence and Written Reports

K. Future Discussion/Agendas

1. Amended Procedures Ordinance --*City Planner*
2. Pursuit of New Agreement with Seaview Sewer District –*Cassinelli*

M. Adjournment

N. Upcoming Meetings

COUNCIL/COMMISSION	PURPOSE	DAY	DATE	TIME	LOCATION
City Council	Regular Meeting	Monday	09/08/14 09/22/14	6:00 p.m.	Community Building
City Council	Special Meeting Department of Health	Monday	09/08/14	2:00 p.m.	Ilwaco Fire Station
Parks & Rec. Commission	Regular Meeting	Friday	09/12/14	5:00 p.m.	Community Building
City Council	Special Meeting with Seaview Sewer District	Wednesday	09/24/14	6:00 p.m.	Community Building
Planning Commission	Regular Meeting (meetings subject to cancellation if there is no business to transact)	Tuesday	10/07/14	6:00 p.m.	Community Building
Port/City Council Meeting	Will resume in October	Tuesday	10/14/14	6:00 p.m.	Port Meeting Room



**CITY OF ILWACO
CITY COUNCIL MEETING
Monday, August 25, 2014**

A. Call to order

Mayor Cassinelli called the meeting to order at 6:00pm

B. Flag Salute

The Pledge of Allegiance was recited.

C. Roll Call

Present: Councilmembers Karnofski, Marshall, Chambreau and Forner and Mayor Cassinelli.
Absent: Councilmember Jensen.

D. Approval of Agenda

ACTION: Motion to approve the agenda (Karnofski/Chambreau). 4 Ayes 0 Nays 0 Abstain.

E. Approval of Consent Agenda

Including Checks 36880 to 36882 + electronic totaling \$20,440.84 and Checks 36883 to 36914 totaling \$42,987.45 for a grand total of \$63,428.29.

ACTION: Motion to approve the consent agenda (Karnofski/Chambreau). 4 Ayes 0 Nays 0 Abstain.

F. Reports

1. Staff Reports

- a. Treasurer McMillan provided a written report.
- b. Public Works Supervisor McKee provided a written report.
- c. Councilmember Forner provided a Fire report and mentioned the county wide drill.
- d. City Planner Ryan Crater reported that he is diligently working on the Compliance Plan update.

2. Council Reports

- a. Councilmember Marshall reported that he is working on some side sewer regulations, that he hopes to have adopted into the City code.
- b. Councilmember Chambreau reported that he attended a meeting with Treasurer McMillan, Councilmember Marshall, the Mayor and a couple others to discuss the potential cold storage building down at the Port of Ilwaco.

3. Mayor's Report

Mayor Cassinelli reported that Blues and Seafood was a success down at the Port of Ilwaco, they had their largest turn out to date. He also distributed an email about the mandatory elected officials training that is due by the end of the year. Lastly he mentioned a potential meeting with the Seaview Sewer District Commissioners in late September.

G. Public Hearing – Conditional Use Permit for McPhail’s Vacation Rental

The Mayor closed the regular meeting at 6:08pm and began the public hearing at 6:08pm, there was no one who came to speak so the Mayor closed the comments at 6:08 p.m. The Mayor reopened the regular meeting at 6:08pm.

H. Comments of Citizens and Guests Present

None

I. Business

1. Amendment to Interlocal Agreement with the Department of Revenue for Business Licensing Services

The City Clerk informed the council that the transaction fee is 2.5% for those applying for a business licenses and paying with a credit card. **ACTION: Motion to authorize the Mayor to execute amendment No. K1143-1 to the Interlocal Agreement between the Department of Revenue and the City of Ilwaco (Marshall/Forner). 4 Ayes 0 Nays 0 Abstain.**

2. Amendment to current Interlocal Agreement with CIAW for City Insurance – Renewal date change

ACTION: Motion to adopt the resolution amending the Interlocal Agreement between the City of Ilwaco and the CIAW (Chambreau/Karnofski). 4 Ayes 0 Nays 0 Abstain.

3. Elizabeth Avenue SE Improvements and Sidewalk Maintenance Project Change Order #2 No further discussion ACTION: Motion to authorize the Mayor to execute Change Order #2 for the Elizabeth Avenue SE Improvements and Sidewalk Maintenance Project increasing the contract with Rognlin’s Inc. for 20 additional days until physical or substantial completion.

4. Conditional Use Permit – McPhail Vacation Rental

ACTION: Motion to approve this conditional use permit as recommended by the City Planner and the Planning Commission under the conditions provided in the City Planner’s Staff Report in the matter of the McPhail conditional use permit. (Marshall/Forner). 4 Ayes 0 Nays 0 Abstain

I. Discussion

1. Elizabeth Avenue SE Improvements and Sidewalk Maintenance Project Change Order #2
Councilmember Forner asked when the light poles are estimated to arrive, the City Clerk responded that G&O expects them the second week of September. The Mayor noted that this is only the second change order for this project. **ACTION: Motion to move this item to business (Forner/Marshall). 4 Ayes 0 Nays 0 Abstain**

2. Conditional Use Permit – McPhail Vacation Rental

The Mayor explained the unique location of this property, he also mentioned that the house has been in the McPhail family for years. Councilmember Marshall brought up the fact that there were applications for vacation rentals submitted to the City a couple years ago, before the land use table was adopted. Therefore, they did not have to apply for a conditional use permit.

ACTION: Motion to move this item to business (Marshall/Chambreau). 4 Ayes 0 Nays 0 Abstain

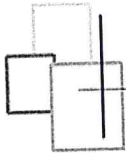
K. Correspondence and Written Reports

L. Adjournment

ACTION: Motion to adjourn the meeting (Chambreau). Mayor Cassinelli adjourned the meeting at 6:19 p.m.

Mike Cassinelli, Mayor

Ariel Smith, Deputy City Clerk



Register

Number	Name	Fiscal Description	Cleared	Amount
36915	Fero, Jimmie W	2014 - September - First meeting		\$979.25
36916	Gardner, Daryl W	2014 - September - First meeting		\$1,488.41
36917	Jensen, David	2014 - September - First meeting		\$181.52
36918	Richardson, Troy	2014 - September - First meeting		\$1,168.89
36919	Williams, Thomas R	2014 - September - First meeting		\$889.89
36920	AWC - Life Insurance	2014 - September - First meeting		\$13.40
36921	AWC Employee Benefit Trust	2014 - September - First meeting		\$5,311.38
36922	Dept of Retirement - Def Comp	2014 - September - First meeting		\$280.00
36923	Dept of Retirement Systems	2014 - September - First meeting		\$5,609.93
ACH Pay - 1194	Benson, Austin	2014 - September - First meeting		\$875.10
ACH Pay - 1195	Cassinelli, Michael	2014 - September - First meeting		\$422.61
ACH Pay - 1196	Chambreau, Jon H.	2014 - September - First meeting		\$181.52
ACH Pay - 1198	Fornier, Gary	2014 - September - First meeting		\$374.26
ACH Pay - 1200	Gustafson, David M.	2014 - September - First meeting		\$1,538.24
ACH Pay - 1201	Hazen, Warren M.	2014 - September - First meeting		\$1,618.29
ACH Pay - 1203	Marshall, Fred	2014 - September - First meeting		\$181.52
ACH Pay - 1204	Mc Kee, David A	2014 - September - First meeting		\$1,594.13
ACH Pay - 1205	Mc Millan, Elaine	2014 - September - First meeting		\$1,107.90
ACH Pay - 1206	Mulinix, Vinessa	2014 - September - First meeting		\$180.32
ACH Pay - 1208	Schweizer, Dennis	2014 - September - First meeting		\$1,605.46
ACH Pay - 1209	Smith, Ariel	2014 - September - First meeting		\$764.09
ACH Pay - 1210	Staples, Terri P	2014 - September - First meeting		\$319.65
EFT-9-5-14 1	U.S. Treasury Department	2014 - September - First meeting		\$4,835.57
EFT-9-5-14 2	Discovery Benefits	2014 - September - First meeting		\$1,125.00
				\$32,646.33

I, the undersigned, do hereby certify under penalty of perjury that the materials have been furnished, the services rendered or the labor performed as described herein, that any advance payment is due and payable pursuant to a contract or is available as an option for full or partial fulfillment of a contractual obligation, and that the claim is a just, due and unpaid obligation against the City of Ilwaco, and that I am authorized to authenticate and certify said claims.

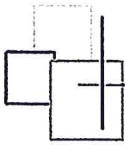
Treasurer

36915 through 36923 and electronic payments totalling \$32,646.33 are approved this 8th day of September, 2014.

Council member

Council member

Council member



Register

Fiscal: 2014

Deposit Period: 2014 - September

Check Period: 2014 - September - First meeting

Number	Name	Particulars	Debiting Date	Amount
Bank of the Pacific 8023281				
Check				
<u>36924</u>	ABECO Office Systems	9/8/2014		\$60.28
<u>36925</u>	ALS Environmental	9/8/2014		\$114.00
<u>36926</u>	AlSCO-American Linen Div.	9/8/2014		\$32.81
<u>36927</u>	Art's Auto Parts, Inc.	9/8/2014		\$23.54
<u>36928</u>	Backflow Management Inc.	9/8/2014		\$900.00
<u>36929</u>	Brimar Identification and Safety Products	9/8/2014		\$390.03
<u>36930</u>	Cartomation, Inc.	9/8/2014		\$50.00
<u>36931</u>	Cascade Columbia Distribution Co.	9/8/2014		\$3,489.82
<u>36932</u>	Chinook Observer	9/8/2014		\$249.60
<u>36933</u>	Cities Insurance Association of WA	9/8/2014		\$16,169.66
<u>36934</u>	City of Ilwaco	9/8/2014		\$2,592.41
<u>36935</u>	City of Long Beach	9/8/2014		\$15,261.69
<u>36936</u>	Coast Rehabilitation Services	9/8/2014		\$35.00
<u>36937</u>	Dennis CO	9/8/2014		\$487.63
<u>36938</u>	Department of Licensing	9/8/2014		\$432.15
<u>36939</u>	Englund Marine Supply Inc	9/8/2014		\$520.72
<u>36940</u>	Foster Pepper	9/8/2014		\$267.50
<u>36941</u>	Gardner, Daryl	9/8/2014		\$39.99
<u>36942</u>	Goulter Diamond Bar Ranch	9/8/2014		\$1,333.33
<u>36943</u>	Grainger	9/8/2014		\$356.59
<u>36944</u>	HD Fowler Company	9/8/2014		\$2,262.96
<u>36945</u>	Heather Reynolds, Attorney	9/8/2014		\$2,340.00
<u>36946</u>	John Bageant	9/8/2014		\$35.75
<u>36947</u>	Lawson Products	9/8/2014		\$147.47
<u>36948</u>	LEAF	9/8/2014		\$129.88
<u>36949</u>	McMillan, Elaine	9/8/2014		\$155.68
<u>36950</u>	Michael S. Turner	9/8/2014		\$412.00
<u>36951</u>	Nancy McAllister	9/8/2014		\$412.00
<u>36952</u>	Oman & Son	9/8/2014		\$48.08
<u>36953</u>	One Call Concepts, Inc.	9/8/2014		\$26.29
<u>36954</u>	Pacific County Treasurer	9/8/2014		\$200.00
<u>36955</u>	Peninsula Sanitation Service, Inc.	9/8/2014		\$331.73
<u>36956</u>	Platt	9/8/2014		\$55.02
<u>36957</u>	Sparks Automotive Inc.	9/8/2014		\$261.23
<u>36958</u>	State of WA Dept of DES Surplus Operations	9/8/2014		\$4,925.00
<u>36959</u>	Sunset Auto Parts Inc.	9/8/2014		\$678.12
<u>36960</u>	Tidy By The Sea, LLC	9/8/2014		\$455.00
<u>36961</u>	Tire Hut	9/8/2014		\$968.28
<u>36962</u>	USA Blue Book	9/8/2014		\$795.68
<u>36963</u>	Verizon Wireless	9/8/2014		\$91.61
<u>36964</u>	Visa	9/8/2014		\$136.31
<u>36965</u>	Walter E. Nelson Co. of Astoria	9/8/2014		\$36.61
<u>36966</u>	Western Systems Refuse & Recycling Solutions	9/8/2014		\$143.59
<u>36967</u>	William R. Penoyar, Attorney at Law	9/8/2014		\$412.00
<u>36968</u>	Goulter Diamond Bar Ranch	9/8/2014		\$4,000.00
<u>36969</u>	IFOCUS Consulting Inc.	9/8/2014		\$1,949.17
<u>36970</u>	Mccall Tire Center, Inc.	9/8/2014		\$80.50
<u>36971</u>	Sunset Auto Parts Inc.	9/8/2014		\$9.70
<u>36972</u>	Vision Municipal Solutions, Llc	9/8/2014		\$451.92
<u>36973</u>	Wilcox & Flegel Oil Co.	9/8/2014		\$1,304.54

Invoice #	Name	Invoice Date	Invoice Amount	Balance
36974	Wirkkala Radio-TV	9/8/2014		\$32.33
			Total Check	\$66,095.20
			Total 8023281	\$66,095.20
			Grand Total	\$66,095.20

I, the undersigned, do hereby certify under penalty of perjury that the materials have been furnished, the services rendered or the labor performed as described herein, that any advance payment is due and payable pursuant to a contract or is available as an option for full or partial fulfillment of a contractual obligation, and that the claim is a just, due and unpaid obligation against the City of Ilwaco, and that I am authorized to authenticate and certify said claims.

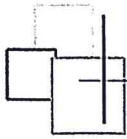
Treasurer

36924 through 36974 totalling \$66,095.20 are approved this 8th day of September, 2014.

Council member

Council member

Council member



Voucher Directory

Voucher Number	Description	Amount
ABECO Office Systems 36924	2014 - September - First meeting	
	Invoice - 9/3/2014 12:22:05 PM	
	1247108-0	
	001-000-000-514-20-31-00	Office & Operating Supplies \$15.07
	101-000-000-543-30-30-00	Office And Operating \$15.07
	401-000-000-534-00-31-00	Operation & Maintenance \$15.07
	409-000-000-535-00-31-01	Operations And Maintenance \$15.07
	Total Invoice - 9/3/2014 12:22:05 PM	\$60.28
Total 36924		\$60.28
Total ABECO Office Systems		\$60.28
ALS Environmental 36925	2014 - September - First meeting	
	Invoice - 8/29/2014 5:43:30 PM	
	51-269590-0	
	409-000-000-535-00-31-01	Operations And Maintenance \$114.00
	Total Invoice - 8/29/2014 5:43:30 PM	\$114.00
Total 36925		\$114.00
Total ALS Environmental		\$114.00
AlSCO-American Linen Div. 36926	2014 - September - First meeting	
	Invoice - 8/29/2014 5:44:11 PM	
	LPOR1271082	
	001-000-000-576-80-31-00	Office & Operating Supplies \$8.20
	101-000-000-543-30-30-00	Office And Operating \$8.20
	401-000-000-534-00-31-00	Operation & Maintenance \$8.20
	409-000-000-535-00-31-01	Operations And Maintenance \$8.21
	Total Invoice - 8/29/2014 5:44:11 PM	\$32.81
Total 36926		\$32.81
Total AlSCO-American Linen Div.		\$32.81
Art's Auto Parts, Inc. 36927	2014 - September - First meeting	
	Invoice - 8/29/2014 5:44:33 PM	
	117228	
	401-000-000-534-00-31-00	Operation & Maintenance \$23.54
	Total Invoice - 8/29/2014 5:44:33 PM	\$23.54
Total 36927		\$23.54
Total Art's Auto Parts, Inc.		\$23.54
Backflow Management Inc. 36928	2014 - September - First meeting	
	Invoice - 8/29/2014 5:45:12 PM	
	7160	
	401-000-000-534-00-41-00	Professional Services \$900.00
	Total Invoice - 8/29/2014 5:45:12 PM	\$900.00
Total 36928		\$900.00
Total Backflow Management Inc.		\$900.00
Brimar Identification and Safety Products 36929	2014 - September - First meeting	
	Invoice - 9/3/2014 8:28:38 AM	
	406087	
	101-000-000-542-30-35-00	Roadway Equipment \$390.03
	Total Invoice - 9/3/2014 8:28:38 AM	\$390.03
Total 36929		\$390.03
Total Brimar Identification and Safety Products		\$390.03
Cartomation, Inc. 36930	2014 - September - First meeting	
	Invoice - 8/29/2014 5:42:41 PM	
	001-000-000-557-20-41-00	Ilwaco Web Page \$50.00
	GIS map storage	
	Total Invoice - 8/29/2014 5:42:41 PM	\$50.00
Total 36930		\$50.00
Total Cartomation, Inc.		\$50.00
Cascade Columbia Distribution Co. 36931	2014 - September - First meeting	
	Invoice - 8/29/2014 5:45:39 PM	
	623363	
	401-000-000-534-00-31-01	Chemicals \$3,889.82
	Total Invoice - 8/29/2014 5:45:39 PM	\$3,889.82
	Invoice - 9/3/2014 8:30:42 AM	
	623850	
	401-000-000-534-00-31-01	Chemicals (\$400.00)

Vendor	Number	Reference	Account Number	Description	Amount
		Total Invoice - 9/3/2014 8:30:42 AM			(\$400.00)
	Total 36931				\$3,489.82
Total Cascade Columbia Distribution Co.					\$3,489.82
Chinook Observer					
	36932	2014 - September - First meeting			
		Invoice - 8/29/2014 5:46:32 PM			
		256-14			
		001-000-000-511-30-44-00	Official Publications		\$249.60
		Total Invoice - 8/29/2014 5:46:32 PM			\$249.60
	Total 36932				\$249.60
Total Chinook Observer					\$249.60
Cities Insurance Association of WA					
	36933	2014 - September - First meeting			
		Invoice - 8/29/2014 6:07:12 PM			
		9/1 to 12/1 E36297			
		001-000-000-511-60-46-00	Insurances		\$1,691.35
		001-000-000-522-50-46-00	Insurance		\$2,190.99
		001-000-000-572-50-46-00	Insurance		\$2,503.06
		001-000-000-576-80-46-00	Insurance		\$527.13
		101-000-000-543-30-40-01	Insurance		\$323.39
		104-000-000-557-30-46-00	Heritage Museum - Insurance		\$1,267.70
		401-000-000-534-00-46-00	Insurance		\$4,320.53
		408-000-000-531-38-46-00	Insurance		\$153.61
		409-000-000-535-00-46-00	Insurance		\$3,191.90
		Total Invoice - 8/29/2014 6:07:12 PM			\$16,169.66
	Total 36933				\$16,169.66
Total Cities Insurance Association of WA					\$16,169.66
City of Ilwaco					
	36934	2014 - September - First meeting			
		Invoice - 8/29/2014 6:04:02 PM			
		001-000-000-511-60-47-02	City Sewer - Museum		\$39.75
		001-000-000-514-20-47-02	Water - City Hall		\$51.70
		001-000-000-514-20-47-03	Sewer - City Hall		\$77.39
		001-000-000-514-20-47-04	Storm Drainage		\$25.11
		001-000-000-522-50-47-01	Water		\$196.08
		001-000-000-522-50-47-02	Sewer		\$315.49
		001-000-000-522-50-47-03	Storm Drainage		\$61.14
		001-000-000-572-50-47-01	City Water		\$155.34
		001-000-000-572-50-47-02	City Sewer		\$225.63
		001-000-000-572-50-47-03	Storm Drainage		\$9.84
		001-000-000-576-80-47-01	Water-Parks, Sprinklers,Blk Lake		\$184.39
		001-000-000-576-80-47-02	Sewer-Parks, Black Lake		\$55.88
		001-000-000-576-80-47-03	Storm Drainage		\$19.65
		409-000-000-535-00-47-02	Water		\$485.30
		409-000-000-535-00-47-03	Sewer		\$660.24
		409-000-000-535-00-47-05	Storm Drainage		\$29.48
		Total Invoice - 8/29/2014 6:04:02 PM			\$2,592.41
	Total 36934				\$2,592.41
Total City of Ilwaco					\$2,592.41
City of Long Beach					
	36935	2014 - September - First meeting			
		Invoice - 8/29/2014 5:41:33 PM			
		001-000-000-521-10-50-00	Law Enforcement Contract		\$15,261.69
		Total Invoice - 8/29/2014 5:41:33 PM			\$15,261.69
	Total 36935				\$15,261.69
Total City of Long Beach					\$15,261.69
Coast Rehabilitation Services					
	36936	2014 - September - First meeting			
		Invoice - 8/29/2014 6:08:02 PM			
		587064			
		001-000-000-514-20-31-00	Office & Operating Supplies		\$35.00
		Total Invoice - 8/29/2014 6:08:02 PM			\$35.00
	Total 36936				\$35.00
Total Coast Rehabilitation Services					\$35.00
Dennis CO					
	36937	2014 - September - First meeting			
		Invoice - 9/3/2014 2:38:21 PM			
		001-000-000-576-80-31-00	Office & Operating Supplies		\$133.06
		401-000-000-534-00-31-00	Operation & Maintenance		\$334.63
		408-000-000-531-38-31-01	Operations & Maintenance		\$9.97
		409-000-000-535-00-31-01	Operations And Maintenance		\$9.97
		Total Invoice - 9/3/2014 2:38:21 PM			\$487.63
	Total 36937				\$487.63
Total Dennis CO					\$487.63
Department of Licensing					
	36938	2014 - September - First meeting			
		Invoice - 8/29/2014 6:16:58 PM			
		plates			
		409-000-000-594-64-35-02	Vehicle Purchase -Grit Trlr		\$432.15
		Total Invoice - 8/29/2014 6:16:58 PM			\$432.15
	Total 36938				\$432.15
Total Department of Licensing					\$432.15

Vendor	Invoice	Reference	Amount	Amount	Invoice	Amount
Englund Marine Supply Inc 36939				2014 - September - First meeting		
	Invoice - 9/3/2014 2:28:23 PM					
	001-000-000-576-80-48-00	Repairs & Maintenance	\$65.04			
	101-000-000-543-30-30-00	Office And Operating	\$65.04			
	401-000-000-534-00-31-00	Operation & Maintenance	\$204.15			
	408-000-000-531-38-31-01	Operations & Maintenance	\$8.62			
	409-000-000-535-00-31-01	Operations And Maintenance	\$177.87			
	Total Invoice - 9/3/2014 2:28:23 PM		\$520.72			
Total 36939			\$520.72			
Total Englund Marine Supply Inc Foster Pepper			\$520.72			
36940				2014 - September - First meeting		
	Invoice - 8/29/2014 6:08:34 PM					
	1080268					
	001-000-000-515-30-41-00	Legal Services	\$267.50			
	Total Invoice - 8/29/2014 6:08:34 PM		\$267.50			
Total 36940			\$267.50			
Total Foster Pepper Gardner, Daryl			\$267.50			
36941				2014 - September - First meeting		
	Invoice - 9/3/2014 8:25:53 AM					
	reimburse for Staples					
	401-000-000-534-00-31-06	Office & Customer Service	\$39.99			
	Total Invoice - 9/3/2014 8:25:53 AM		\$39.99			
Total 36941			\$39.99			
Total Gardner, Daryl Goulter Diamond Bar Ranch			\$39.99			
36942				2014 - September - First meeting		
	Invoice - 8/29/2014 5:42:30 PM					
	409-000-000-535-00-45-00	Spray Sludge Disposal Site	\$1,333.33			
	sludge site					
	Total Invoice - 8/29/2014 5:42:30 PM		\$1,333.33			
Total 36942			\$1,333.33			
36968				2014 - September - First meeting		
	Invoice - 9/3/2014 3:40:30 PM					
	purchase booster station property					
	401-000-000-594-64-34-02	Contingency	\$4,000.00			
	Total Invoice - 9/3/2014 3:40:30 PM		\$4,000.00			
Total 36968			\$4,000.00			
Total Goulter Diamond Bar Ranch Grainger			\$5,333.33			
36943				2014 - September - First meeting		
	Invoice - 8/29/2014 6:09:11 PM					
	9523355858					
	401-000-000-534-00-31-00	Operation & Maintenance	\$293.01			
	Total Invoice - 8/29/2014 6:09:11 PM		\$293.01			
	Invoice - 8/29/2014 6:09:41 PM					
	9522459859					
	401-000-000-534-00-31-00	Operation & Maintenance	\$63.58			
	Total Invoice - 8/29/2014 6:09:41 PM		\$63.58			
Total 36943			\$356.59			
Total Grainger HD Fowler Company			\$356.59			
36944				2014 - September - First meeting		
	Invoice - 8/29/2014 6:11:06 PM					
	I3723040					
	401-000-000-534-00-31-00	Operation & Maintenance	\$1,241.47			
	Total Invoice - 8/29/2014 6:11:06 PM		\$1,241.47			
	Invoice - 8/29/2014 6:11:44 PM					
	I3723046					
	401-000-000-534-00-31-00	Operation & Maintenance	\$508.20			
	Total Invoice - 8/29/2014 6:11:44 PM		\$508.20			
	Invoice - 8/29/2014 6:13:19 PM					
	I3723996					
	401-000-000-534-00-31-00	Operation & Maintenance	\$109.23			
	Total Invoice - 8/29/2014 6:13:19 PM		\$109.23			
	Invoice - 9/3/2014 8:34:31 AM					
	I3604597					
	401-000-000-534-00-31-00	Operation & Maintenance	\$404.06			
	Total Invoice - 9/3/2014 8:34:31 AM		\$404.06			
Total 36944			\$2,262.96			
Total HD Fowler Company Heather Reynolds, Attorney			\$2,262.96			
36945				2014 - September - First meeting		
	Invoice - 9/3/2014 8:32:13 AM					
	Aug 2014					
	001-000-000-515-30-41-00	Legal Services	\$2,340.00			
	Total Invoice - 9/3/2014 8:32:13 AM		\$2,340.00			
Total 36945			\$2,340.00			
Total Heather Reynolds, Attorney IFOCUS Consulting Inc.			\$2,340.00			

36969	2014 - September - First meeting			
	Invoice - 9/4/2014 11:36:14 AM			
	7603			
	001-000-000-514-20-41-00	Professional Services		\$120.00
	401-000-000-534-00-41-04	Professional Services - Computer system		\$120.00
	409-000-000-535-00-41-02	Professional Services - Computer		\$120.00
	Total Invoice - 9/4/2014 11:36:14 AM			\$360.00
	Invoice - 9/4/2014 11:37:03 AM			
	7560			
	001-000-000-594-64-14-00	Administrative Equipment		\$1,589.17
	Total Invoice - 9/4/2014 11:37:03 AM			\$1,589.17
Total 36969				\$1,949.17
Total IFOCUS Consulting Inc.				\$1,949.17
John Bageant				
36946	2014 - September - First meeting			
	Invoice - 8/29/2014 6:10:04 PM			
	reimburse for bulbs			
	001-000-000-522-10-31-00	Office & Operating Supplies		\$35.75
	Total Invoice - 8/29/2014 6:10:04 PM			\$35.75
Total 36946				\$35.75
Total John Bageant				\$35.75
Lawson Products				
36947	2014 - September - First meeting			
	Invoice - 8/29/2014 6:13:42 PM			
	9302673862			
	001-000-000-576-80-31-00	Office & Operating Supplies		\$36.89
	101-000-000-543-30-30-02	Small Tools & Equipment		\$36.86
	401-000-000-534-00-31-00	Operation & Maintenance		\$36.86
	409-000-000-535-00-31-01	Operations And Maintenance		\$36.86
	Total Invoice - 8/29/2014 6:13:42 PM			\$147.47
Total 36947				\$147.47
Total Lawson Products				\$147.47
LEAF				
36948	2014 - September - First meeting			
	Invoice - 9/3/2014 8:34:06 AM			
	5203976			
	001-000-000-514-20-31-00	Office & Operating Supplies		\$22.08
	001-000-000-522-10-31-00	Office & Operating Supplies		\$20.78
	101-000-000-543-30-30-00	Office And Operating		\$22.08
	401-000-000-534-00-31-00	Operation & Maintenance		\$22.08
	408-000-000-531-38-31-01	Operations & Maintenance		\$20.78
	409-000-000-535-00-31-01	Operations And Maintenance		\$22.08
	Total Invoice - 9/3/2014 8:34:06 AM			\$129.88
Total 36948				\$129.88
Total LEAF				\$129.88
Mccall Tire Center, Inc.				
36970	2014 - September - First meeting			
	Invoice - 9/4/2014 11:26:38 AM			
	72100146838			
	001-000-000-576-80-48-00	Repairs & Maintenance		\$80.50
	Total Invoice - 9/4/2014 11:26:38 AM			\$80.50
Total 36970				\$80.50
Total Mccall Tire Center, Inc.				\$80.50
McMillan, Elaine				
36949	2014 - September - First meeting			
	Invoice - 9/3/2014 12:16:14 PM			
	travel to DOE workshop and meet with auditor on 7/31			
	001-000-000-514-20-43-00	Travel/Meals/Lodging		\$155.68
	Total Invoice - 9/3/2014 12:16:14 PM			\$155.68
Total 36949				\$155.68
Total McMillan, Elaine				\$155.68
Michael S. Turner				
36950	2014 - September - First meeting			
	Invoice - 8/29/2014 5:42:21 PM			
	001-000-000-512-50-40-03	Municipal Court Services		\$412.00
	Court services			
	Total Invoice - 8/29/2014 5:42:21 PM			\$412.00
Total 36950				\$412.00
Total Michael S. Turner				\$412.00
Nancy McAllister				
36951	2014 - September - First meeting			
	Invoice - 8/29/2014 5:42:06 PM			
	001-000-000-512-50-40-03	Municipal Court Services		\$412.00
	Court services			
	Total Invoice - 8/29/2014 5:42:06 PM			\$412.00
Total 36951				\$412.00
Total Nancy McAllister				\$412.00
Oman & Son				
36952	2014 - September - First meeting			
	Invoice - 9/3/2014 2:24:12 PM			
	August 2014			
	001-000-000-514-20-31-00	Office & Operating Supplies		\$3.76

Vendor	Invoice	Date Recd	Account Number	Description	Amount
			401-000-000-534-00-31-00	Operation & Maintenance	\$44.32
			Total Invoice - 9/3/2014 2:24:12 PM		\$48.08
Total 36952					\$48.08
Total Oman & Son					\$48.08
One Call Concepts, Inc.					\$48.08
36953					
			2014 - September - First meeting		
	Invoice - 9/3/2014 12:21:40 PM				
	4089073				
	101-000-000-543-30-30-00		Office And Operating		\$8.76
	401-000-000-534-00-31-00		Operation & Maintenance		\$8.77
	409-000-000-535-00-31-01		Operations And Maintenance		\$8.76
	Total Invoice - 9/3/2014 12:21:40 PM				\$26.29
Total 36953					\$26.29
Total One Call Concepts, Inc.					\$26.29
Pacific County Treasurer					
36954					
			2014 - September - First meeting		
	Invoice - 8/29/2014 6:15:07 PM				
	001-000-000-512-50-40-03		Municipal Court Services		\$200.00
	Total Invoice - 8/29/2014 6:15:07 PM				\$200.00
Total 36954					\$200.00
Total Pacific County Treasurer					\$200.00
Peninsula Sanitation Service, Inc.					\$200.00
36955					
			2014 - September - First meeting		
	Invoice - 9/3/2014 8:31:28 AM				
	001-000-000-514-20-47-01		Garbage Bills		\$285.22
	409-000-000-535-00-47-04		Garbage Services		\$46.51
	Total Invoice - 9/3/2014 8:31:28 AM				\$331.73
Total 36955					\$331.73
Total Peninsula Sanitation Service, Inc.					\$331.73
Platt					
36956					
			2014 - September - First meeting		
	Invoice - 8/29/2014 6:15:26 PM				
	E762063				
	401-000-000-534-00-31-00		Operation & Maintenance		\$14.22
	Total Invoice - 8/29/2014 6:15:26 PM				\$14.22
	Invoice - 8/29/2014 6:15:52 PM				
	E769444				
	401-000-000-534-00-31-00		Operation & Maintenance		\$40.80
	Total Invoice - 8/29/2014 6:15:52 PM				\$40.80
Total 36956					\$55.02
Total Platt					\$55.02
Sparks Automotive Inc.					
36957					
			2014 - September - First meeting		
	Invoice - 8/29/2014 6:16:17 PM				
	19749				
	409-000-000-535-00-48-01		Repairs And Maintenance		\$261.23
	Total Invoice - 8/29/2014 6:16:17 PM				\$261.23
Total 36957					\$261.23
Total Sparks Automotive Inc.					\$261.23
State of WA Dept of DES Surplus Operations					
36958					
			2014 - September - First meeting		
	Invoice - 8/29/2014 6:18:29 PM				
	409-000-000-594-64-35-02		Vehicle Purchase -Grit Trlr		\$4,925.00
	Total Invoice - 8/29/2014 6:18:29 PM				\$4,925.00
Total 36958					\$4,925.00
Total State of WA Dept of DES Surplus Operations					\$4,925.00
Sunset Auto Parts Inc.					
36959					
			2014 - September - First meeting		
	Invoice - 9/3/2014 2:25:07 PM				
	001-000-000-576-80-31-00		Office & Operating Supplies		\$87.01
	101-000-000-543-30-30-00		Office And Operating		\$58.98
	401-000-000-534-00-31-00		Operation & Maintenance		\$172.57
	409-000-000-535-00-31-01		Operations And Maintenance		\$359.56
	Total Invoice - 9/3/2014 2:25:07 PM				\$678.12
Total 36959					\$678.12
36971					
			2014 - September - First meeting		
	Invoice - 9/4/2014 11:39:15 AM				
	923-806564				
	001-000-000-522-10-31-00		Office & Operating Supplies		\$9.70
	Total Invoice - 9/4/2014 11:39:15 AM				\$9.70
Total 36971					\$9.70
Total Sunset Auto Parts Inc.					\$687.82
Tidy By The Sea, LLC					
36960					
			2014 - September - First meeting		
	Invoice - 8/29/2014 5:42:54 PM				
	001-000-000-514-20-31-00		Office & Operating Supplies		\$80.00
	001-000-000-522-10-31-00		Office & Operating Supplies		\$40.00
	001-000-000-572-50-41-00		Custodian Library		\$335.00
	Total Invoice - 8/29/2014 5:42:54 PM				\$455.00
Total 36960					\$455.00
Total Tidy By The Sea, LLC					\$455.00
Tire Hut					

Vendor	Invoice #	Invoice Date	Invoice Number	Invoice Period	Amount
Total Tire Hut USA Blue Book	36961	2014 - September - First meeting			
		Invoice - 9/3/2014 12:22:31 PM			
			5428		
			001-000-000-576-80-48-00	Repairs & Maintenance	\$12.13
			101-000-000-542-70-31-00	Roadside Operating	\$12.13
		Total Invoice - 9/3/2014 12:22:31 PM			
					\$24.26
		Invoice - 9/3/2014 8:23:02 AM			
			001-000-000-576-80-48-00	Repairs & Maintenance	\$188.80
			101-000-000-543-30-30-00	Office And Operating	\$188.80
Total USA Blue Book Verizon Wireless			401-000-000-534-00-48-00	Vehicle Repairs/Maintenance	\$188.80
			408-000-000-531-38-31-01	Operations & Maintenance	\$188.80
			409-000-000-535-00-48-01	Repairs And Maintenance	\$188.82
		Total Invoice - 9/3/2014 8:23:02 AM			
					\$944.02
	Total 36961				\$968.28
					\$968.28
	36962	2014 - September - First meeting			
		Invoice - 9/3/2014 8:29:12 AM			
			430823		
Total Visa Vision Municipal Solutions, Llc			401-000-000-534-00-31-00	Operation & Maintenance	\$114.04
		Total Invoice - 9/3/2014 8:29:12 AM			
					\$114.04
		Invoice - 9/3/2014 8:29:35 AM			
			430326		
			401-000-000-534-00-31-00	Operation & Maintenance	\$681.64
		Total Invoice - 9/3/2014 8:29:35 AM			
					\$681.64
	Total 36962				\$795.68
					\$795.68
Total Verizon Wireless Visa	36963	2014 - September - First meeting			
		Invoice - 9/3/2014 8:31:57 AM			
			401-000-000-534-00-42-00	Communications	\$91.61
		Total Invoice - 9/3/2014 8:31:57 AM			
					\$91.61
	Total 36963				\$91.61
					\$91.61
	36964	2014 - September - First meeting			
		Invoice - 9/3/2014 12:23:37 PM			
			Staples		
Total Vision Municipal Solutions, Llc Walter E. Nelson Co. of Astoria			001-000-000-514-20-31-00	Office & Operating Supplies	\$11.61
		Total Invoice - 9/3/2014 12:23:37 PM			
					\$11.61
		Invoice - 9/3/2014 8:52:19 AM			
			Staples		
			001-000-000-514-20-31-00	Office & Operating Supplies	\$41.56
			401-000-000-534-00-31-06	Office & Customer Service	\$41.57
			409-000-000-535-00-31-08	Office Supplies & Customer Service	\$41.57
		Total Invoice - 9/3/2014 8:52:19 AM			
					\$124.70
Total Vision Municipal Solutions, Llc Walter E. Nelson Co. of Astoria	Total 36964				\$136.31
					\$136.31
	36972	2014 - September - First meeting			
		Invoice - 9/4/2014 11:56:31 AM			
			2537		
			401-000-000-534-00-31-06	Office & Customer Service	\$175.96
			408-000-000-531-38-31-01	Operations & Maintenance	\$100.00
			409-000-000-535-00-31-08	Office Supplies & Customer Service	\$175.96
		Total Invoice - 9/4/2014 11:56:31 AM			
					\$451.92
Total Western Systems Refuse & Recycling Solutions Wilcox & Flegel Oil Co.	Total 36972				\$451.92
					\$451.92
	36965	2014 - September - First meeting			
		Invoice - 9/3/2014 8:30:03 AM			
			377149		
			401-000-000-534-00-31-00	Operation & Maintenance	\$36.61
		Total Invoice - 9/3/2014 8:30:03 AM			
					\$36.61
	Total 36965				\$36.61
					\$36.61
Total Western Systems Refuse & Recycling Solutions Wilcox & Flegel Oil Co.	36966	2014 - September - First meeting			
		Invoice - 8/29/2014 6:19:10 PM			
			8682		
			401-000-000-534-00-31-00	Operation & Maintenance	\$143.59
		Total Invoice - 8/29/2014 6:19:10 PM			
					\$143.59
	Total 36966				\$143.59
					\$143.59
	36973	2014 - September - First meeting			
		Invoice - 9/4/2014 11:59:14 AM			
Total Western Systems Refuse & Recycling Solutions Wilcox & Flegel Oil Co.			001-000-000-576-80-31-00	Office & Operating Supplies	\$192.70
			101-000-000-543-30-30-01	Gasoline & Oil Products	\$192.70
			401-000-000-534-00-32-00	Gasoline	\$676.55
			409-000-000-535-00-32-00	Gas/oil Products	\$242.59
		Total Invoice - 9/4/2014 11:59:14 AM			
					\$1,304.54

Vendor	Amount	Reference	Account Number	Amount
	Total 36973			\$1,304.54
Total Wilcox & Flegel Oil Co.				\$1,304.54
William R. Penoyar, Attorney at Law				
36967		2014 - September - First meeting		
	Invoice - 8/29/2014 5:41:57 PM			
	001-000-000-512-50-40-03	Municipal Court Services		\$412.00
	Total Invoice - 8/29/2014 5:41:57 PM			\$412.00
Total 36967				\$412.00
Total William R. Penoyar, Attorney at Law				
Wirkkala Radio-TV				
36974		2014 - September - First meeting		
	Invoice - 9/4/2014 11:39:53 AM			
	524178			
	409-000-000-535-00-31-01	Operations And Maintenance		\$32.33
	Total Invoice - 9/4/2014 11:39:53 AM			\$32.33
Total 36974				\$32.33
Total Wirkkala Radio-TV				\$32.33
Grand Total	Vendor Count	49		\$66,095.20

Long Beach Police

P.O. Box 795
Long Beach, WA 98631

lbpdchief@centurytel.net

Phone 360-642-2911
Fax 360-642-5273

09-01-14

Page 1 of 2

To: Mayor Cassinelli and Ilwaco City Council

From: Chief Flint R. Wright

Ref.: Monthly Report for August 2014

During the month of August the Long Beach Police Department handled the following cases and calls:

Long Beach

1017 Total Incidents
Aid Call Assists: 6
Alarms: 10
Animal Complaints: 21
Assaults: 7
Assists: 107
(Includes 15 Law Enforcement Agency Assists Outside City Boundaries)
Burglaries: 1
Disturbance: 30
Drug Inv.: 8
Fire Call Assists: 14
Follow Up: 170
Found/Lost Property: 27
Harassment: 14
Malicious Mischief: 9
MIP – Alcohol: 0
MIP – Tobacco: 0
Missing Person: 7
Prowler: 1
Runaway: 2
Security Checks: 210
Suspicious: 55
Thefts: 21
Traffic Accidents: 10
Traffic Complaints: 28
Traffic Tickets: 42
Traffic Warnings: 170
Trespass: 14
Warrant Contacts: 24
Welfare Checks: 9

Ilwaco

389 Total Incidents
Aid Call Assists: 4
Alarms: 6
Animal Complaints: 7
Assaults: 7
Assists: 55
(Includes 15 Law Enforcement Agency Assists Outside City Boundaries)
Burglaries: 0
Disturbance: 17
Drug Inv.: 4
Fire Call Assists: 1
Follow Up: 96
Found/Lost Property: 6
Harassment: 4
Malicious Mischief: 2
MIP – Alcohol: 0
MIP – Tobacco: 0
Missing Person: 1
Prowler: 1
Runaway: 0
Security Checks: 90
Suspicious: 19
Thefts: 6
Traffic Accidents: 6
Traffic Complaints: 4
Traffic Tickets: 7
Traffic Warnings: 34
Trespass: 2
Warrant Contacts: 2
Welfare Checks: 8

Jake's Birthday celebration was held on August 2nd. The crowds for this event were large and well behaved.

On the 2nd I gave a short speech to kick off the "Race Against Domestic Violence" held in Long Beach. I talked about how important it is for the victims of domestic violence to know that they have help and support available to them. This was the 5th year for this event which was started in memory of Lisa Bonney.

August 4th – 9th I held my annual hunter education and firearms safety course. I had 14 students in the class this year. I was assisted by three other instructors, Dan Chadwick, Ron Gleitner and Jerry Greene.

The department provided traffic control for the Junior Rodeo Parade on the 8th.

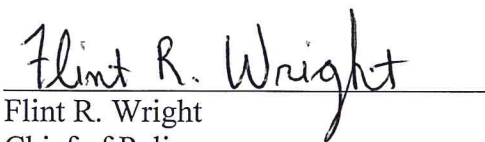
The Blues and Seafood Festival was held in Ilwaco August 15th and 16th. I had an officer provide security at the organizers request. We had absolutely no problems.

Kite Festival week, August 18th – 24th, went well. As usual the crowds were large and very well behaved. We had no issues or problems associated with the event.

I attended training on the 20th. The class was put on by Washington Cities Insurance Authority and was titled "Building Supervisory Skills". The class dealt with handling conflicts, interviewing skills, decision making and building effective teams.

Officer Michael Parker graduated from the Washington State Criminal Justice Training Commission Basic Law Enforcement Academy on August 29th. Mike did very well at the academy. He was a squad leader and was given an award for outstanding physical fitness.

Labor Day weekend, August 29th – September 1st, went well. We had very few issues and the crowds were large and well behaved.



Flint R. Wright
Chief of Police

CITY OF ILWACO
CITY COUNCIL AGENDA ITEM BRIEFING

A. Meeting Dates: Council Workshop: Public Hearing:
 Council Discussion Item: 09/08/14 Council Business Item:

B. Issue/Topic: **104 Spruce St LLC**

C. Sponsor(s):
 1. Vinessa Karnofski 2. Gary Forner

D. Background (overview of why issue is before council):
 1. This building has been complained about over the years, as a hazard and a blemish on downtown Ilwaco. As of now One Pacific Coast bank established an LLC to own the building. It continues to deteriorate and the Bank does not step in to maintain it at all. There have been reports of asbestos in the building, the roof also seems to be caving in.

E. Discussion (specific details relevant to the issue, pros/cons, alternatives and any other decision-making details)
This building is right in the heart of downtown Ilwaco, everyone who drives through the intersection sees the building. There needs to be at least an attempt to maintain, or improve the structure as it continues to decline as the years go on. If something is not done, it is feared that building will eventually collapse.

F. Impacts:
 1. Fiscal:
 2. Legal: The city attorney has recommended that a letter go out to 104 Spruce St LLC informing them of the Council's position on this topic.
 3. Personnel:
 4. Service/Delivery:

G. Planning Commission: ☐ Recommended ☐ N/A ☐ Public Hearing

H. Time Constraints/Due Dates:

I. Proposed Motion: **I move to authorize the Mayor to request that the city attorney compose a letter to One Pacific Coast Bank stating the City of Ilwaco's concern towards this matter.**

City Clerk

From: Elaine McMillan <treasurer@ilwaco-wa.gov>
Sent: Thursday, August 28, 2014 11:03 AM
To: mayor@ilwaco-wa.gov
Cc: 'Heather Reynolds'; City Clerk
Subject: FW: parcel #10113342013

Mike –

Guy was unable to get any information from the credit officer on the approximate cost to take the building down at the corner of First and Spruce. With One Pacific Coast leaving Ilwaco, I think it would probably be a good idea to follow through with Heather's suggestion and put this on the council agenda to get their support of sending a letter expressing the city's concern of the deterioration of this structure and blight in the downtown corridor. We could work with Gary and Vinessa to on this?

Elaine

From: Heather Reynolds [mailto:heather@reynoldsattorney.com]
Sent: Monday, March 31, 2014 11:59 AM
To: 'Elaine McMillan'
Subject: RE: parcel #10113342013

Elaine,

I have a complimentary title profile on order from Pacific County Title, but they tell me it is owned by 104 Spruce Street, LLC, which is an LLC managed by One PacificCoast Bank. I would say as a first step the property needs to be talked about in a council meeting, and then the LLC manager advised that the council is very concerned. One PacificCoast may not want the publicity. It doesn't look good for a bank founded on principles of helping communities to be causing blight in communities. Reach out to your friends at Craft3 and see if they can give you a helpful One PacificCoast Bank contact.

Although the City has a broad nuisance ordinance which does reference dangerous buildings (8.04) I would recommend enacting a more detailed ordinance pursuant to RCW chapter 35.80. MRSC has a number of examples. Then a city can seek a Superior Court order enforcing the nuisance abatement if it wishes. A city can also condemn the property if it deems it appropriate, but that is a very involved process.

I'll forward the title information. Let me know if you want anything else on this at this point.
Heather

Heather Reynolds
Attorney at Law
PO Box 145
Astoria, OR 97103
Phone 503-325-8449
Fax 503-338-2969

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From: Elaine McMillan [<mailto:treasurer@ilwaco-wa.gov>]
Sent: Thursday, March 27, 2014 1:30 PM
To: 'Heather Reynolds'
Subject: parcel #10113342013

Heather –

There is a large vacant building in the middle of town that sits on the parcel above. Many think the building should be condemned and is beyond repair. The last owner of the building were the Torppa's. They had the building financed through One Pacific Coast Bank (ShoreBank). It appears to me that the bank never actually took the building back, but instead transferred their interest (lien) to an LLC. In my opinion, they probably are aware that if they could potentially end up with a much more substantial loss if they took the building back. It is most likely un-insurable and is a hazard.

Mike wanted me to have you investigate what, if anything, the city could do to get the owner of the building on that parcel to do something about it if the it was found to be a hazard, etc.

Elaine McMillan
Treasurer
City of Ilwaco
P.O. Box 548
Ilwaco, WA 98624
Ph: 360-642-3145
Email: treasurer@ilwaco-wa.gov

CITY OF ILWACO
CITY COUNCIL AGENDA ITEM BRIEFING

A. Meeting Dates: Council Workshop: Public Hearing:
 Council Discussion Item: 09/08/14 Council Business Item:

B. Issue/Topic: **Prohibiting Camping in Public Places**

C. Sponsor(s):

1. David Jensen
- 2.

D. Background (overview of why issue is before council):

1. The purpose of this ordinance is to provide provisions relating to prohibiting camping in parks and other public places.

E. Discussion (specific details relevant to the issue, pros/cons, alternatives and any other decision-making details)

There have reports of people camping near Black Lake and City Park. This ordinance would just reinforce the current code and give specifics to what is defined as camping in public places. The Chief of Police has reviewed the ordinance and agreed with it.

F. Impacts:

1. Fiscal:
2. Legal: The city attorney has recommended that this ordinance be passed.
3. Personnel: The city planner recommended that the council consider an “event pass” of sorts. That would grant permission to an applicant to camp in certain public City locations for specific events.
4. Service/Delivery:

G. Planning Commission: ☐ Recommended ☒ N/A ☐ Public Hearing

H. Time Constraints/Due Dates:

I. Proposed Motion: **I move to adopt the proposed ordinance prohibiting camping in public places.**

**CITY OF ILWACO
ORDINANCE NO. XXX**

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ILWACO, WASHINGTON CREATING A NEW CHAPTER OF THE ILWACO MUNICIPAL CODE, CHAPTER 8.24 ENTITLED "CAMPING PROHIBITED" TO ESTABLISH PROVISIONS RELATING TO PROHIBITED CAMPING IN PARKS AND OTHER PUBLIC PLACES.

WHEREAS, the current provisions of the Ilwaco Municipal Code do not contain adequate provisions relating to prohibiting camping in parks and other public places; and

WHEREAS, the City Council desires to adopt provisions relating to unauthorized camping in order to promote the health, safety and welfare of the community; NOW THEREFORE,

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ILWACO, WASHINGTON, DOES ORDAIN AS FOLLOWS

Section 1. A new chapter, Chapter 8.24 entitled "Camping Prohibited" is hereby adopted to read as follows:

**Chapter 8.24
CAMPING PROHIBITED**

DEFINITIONS.

The following definitions are applicable in this chapter unless the context otherwise requires:

- (a) *Camp* means to pitch, use, or occupy camp facilities for the purposes of habitation or sleeping, as evidenced by the use of camp paraphernalia.
- (b) *Camping facilities* include, but are not limited to trailers, tents, huts, or temporary shelters or vehicles if said vehicle is being used as a temporary living or sleeping quarters.
- (c) *Camping paraphernalia* includes, but is not limited to, tarpaulins, cots, beds, sleeping bags, hammocks, mattresses, cooking facilities or similar equipment.
- (d) *Director* means any person authorized by the mayor to exercise authority over a public place or his or her designee.
- (e) *Park* means and includes all city parks, public squares, park drives, parkways, boulevards, bathing beaches, and play and recreation grounds under the jurisdiction of the City of Ilwaco Parks and Recreation Department.
- (f) *Public place* means and includes streets, ways, boulevards, sidewalks, planting or parking strips, shoulders, squares, triangles, rights-of-way, publicly owned parking lot or publicly owned area, improved or unimproved, and other public places appropriated to the public for public use, including buildings, structures and appurtenances situated thereon.
- (g) *Recreational vehicle* means a travel trailer, motor home, truck camper, or camping trailer that is primarily designed and used as temporary living quarters, is either self-propelled or mounted on or drawn by another vehicle, is transient and is not immobilized or permanently affixed to a mobile home lot.

(h) *Store* means to put aside or accumulate for use when needed, to put for safekeeping, to place or leave in a location.

(i) *Street* means any highway, avenue, lane, road, street, drive, place, boulevard, alley, right-of-way, and every way or place in the City of Ilwaco open as a matter of right to public vehicular travel.

UNAUTHORIZED CAMPING IN PUBLIC PLACES.

It shall be unlawful for any person to camp in any park or other public place.

UNAUTHORIZED STORAGE IN PUBLIC PLACES.

It shall be unlawful for any person to store, pitch or park camping facilities or to store or pitch camping paraphernalia in any park or other public place. Recreational vehicles may be parked in authorized parking spaces within city public rights-of-way if said recreational vehicle is not at that time being used as temporary living quarters.

PENALTY FOR VIOLATIONS.

A person violating of any provision of this chapter shall be guilty of an infraction under Section 1.20.101 of the Ilwaco Municipal Code. Each day, or a portion thereof, during which a violation occurs shall constitute a separate violation.

RULES AND REGULATIONS.

The director may promulgate rules and regulations he or she deems necessary and appropriate to implement, administer and enforce this chapter.

Section 2. Severability. If any one or more sections, subsections, or sentences of this ordinance are held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portion of this ordinance and the same shall remain in full force and effect.

Section 3. Effective Date. This ordinance shall take effect and be in force five (5) days from and after its passage, approval and publication as provided by law.

PASSED BY THE CITY COUNCIL OF THE CITY OF ILWACO, AND SIGNED IN AUTHENTICATION OF ITS PASSAGE THIS XX DAY OF _____, 2014

Mike Cassinelli, Mayor

ATTEST:

Ariel Smith, Deputy City Clerk

VOTE	Jensen	Karnofski	Marshall	Chambreau	Forner	Cassinelli
Ayes						
Nays						
Abstentions						
Absent						

PUBLISHED:

EFFECTIVE:

CITY OF ILWACO
CITY COUNCIL AGENDA ITEM BRIEFING

- A. Meeting Dates: Council Workshop: Public Hearing:
 Council Discussion Item: 09/08/14 Council Business Item:
- B. Issue/Topic: **Authorize the treasurer to dispose of surplus property per the policy.**
- C. Sponsor(s):
 1. Mike Cassinelli 2.
- D. Background (overview of why issue is before council):
 1. In December of 2009, the Ilwaco City Council adopted by resolution a policy on the Disposition of Surplus Property. With the assistance of the department supervisors, a list has been assembled of items that could be disposed (See Exhibit A: Surplus Property, dated September 2014
- E. Discussion (specific details relevant to the issue, pros/cons, alternatives and any other decision-making details)
 1. The list provided identifies the item and an estimated value.
- F. Impacts:
 1. Fiscal: Legal:
 2. Personnel:
 3. Service/Delivery:
- G. Planning Commission: ☐ Recommended ☒ N/A ☐ Public Hearing on
- H. Staff Comments
 1.
- I. Time Constraints/Due Dates:
- J. Proposed Motion: **I move to authorize the treasurer to dispose of the Exhibit A Surplus Property listing dated September 2014, per the Surplus policy.**

EXHIBIT A
SURPLUS PROPERTY
September 2014

Item	Estimated Value
Radio Equipment: as follows.....	\$200
4 - Kenwood VHF mobile radio mod. #TK705D	
1 – Astron corp. model RS-10A A.C. 110 to D.C. 12 volt converter	
1 – Midland VHF mobile radio mod. #70-13368	
2 – Maxon handheld VHF radios mod. #SA1256	
3 – Icom external speakers	
1 - 6 inch Amco Scan coder water meter	\$250
1- 1 inch Amco Scan coder water meter.....	\$100
1 – 4 inch Amco Scan coder water meter.....	\$200
1 – Ford 5610 4WD Tractor with mid mount flail mower.....	\$7500
1 – Air Bumper Jack.....	\$50
1- 10hp Baldor Motor mod. #3656 Goulds 1 ½ x 2 pump.....	\$200
1 – 14” Valve Victaulic.....	\$200
Miscellaneous Brass Meter parts.....	\$250
1996 Ford Ranger XL VIN: 1FTCR1OU1TUB52250.....	\$1000

CITY OF ILWACO
CITY COUNCIL AGENDA ITEM BRIEFING

A. Meeting Dates: Council Workshop: Public Hearing:
 Council Discussion Item: 09/08/14 Council Business Item:

B. Issue/Topic: **City of Ilwaco Developer Standards**

C. Sponsor(s):

1. Mayor Cassinelli
- 2.

D. Background (overview of why issue is before council):

1. The City planner has made the recommendation that this section of the code be moved from chapter 15 to chapter 14, which is currently reserved. The City attorney has drafted an ordinance and the city engineer has made the proper edits to the Conditions and Standards.

E. Discussion (specific details relevant to the issue, pros/cons, alternatives and any other decision-making details): Having the Conditions and Standards moved to chapter 14 would make it so any amendments made would not have to go through the planning process. Everything in chapter 15 is entitled to a planning review per section 15.56.

F. Impacts:

1. Fiscal:
2. Legal: The city attorney has recommended that this change be made.
3. Personnel:
4. Service/Delivery:

G. Planning Commission: ☐ Recommended ☒ N/A ☐ Public Hearing

H. Time Constraints/Due Dates:

Proposed Motion: **I move to adopt the ordinance for Developer Standards and re-number Title 15 part 5 of the Ilwaco Municipal Code to title 14 “Developer Standards”.**

**CITY OF ILWACO
ORDINANCE NO. XXX**

AN ORDINANCE OF THE CITY OF ILWACO, WASHINGTON RE-NUMBERING TITLE 15 PART 5 OF THE ILWACO MUNICIPAL CODE TO BE TITLE 14 "DEVELOPER STANDARDS"; AND AMENDING THE SAME

WHEREAS, the City of Ilwaco has broad powers to maintain and protect the health, safety, and welfare of its citizens; and

WHEREAS, the City has Developer Standards that are used by staff and the City engineer, but the standards are not referenced in the Ilwaco Municipal Code, and

WHEREAS, the City of Ilwaco has determined that it is in the best interest of the City to periodically review and update the Developer Standards in order to eliminate inconsistencies and to stay current with a changing industry and to adopt them by reference in the Ilwaco Municipal Code; and

WHEREAS, the City of Ilwaco desires to delegate authority to the City Engineer to make minor revisions to the Developer Standards that in his/her judgment may be necessary after the effective date of this ordinance, and

WHEREAS, the City of Ilwaco would like to have code sections pertaining to utility and road construction set out in a separate title of its Code of Ordinances.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ILWACO, WASHINGTON, DOES ORDAIN AS FOLLOWS:

SECTION 1: A new Title 14 of the Ilwaco Municipal Code will be named here as the City of Ilwaco Developer Standards. Title 15, Part 5, will be renumbered as Title 14, and amended to read as follows:

**CHAPTER 14.02 CITY OF ILWACO DEVELOPER STANDARDS
ADOPTED**

14.02.010 Adoption by Reference.

The "City of Ilwaco Developer Standards" manual has been prepared to provide a graphic and written representation of minimum standards for construction of public improvement within the public right-of-way, easement, City properties, and on private property relating to utilities which are connected to the utility systems maintained by the City of Ilwaco.

The City of Ilwaco Developer Standards and Pacific County Road Standards are adopted by reference upon the effective date of the ordinance codified herein. Future amendments to the Developer Standards established hereafter shall automatically become a part of this section upon publication:

14.02.020 Definitions.

For the purpose of this Chapter and the City of Ilwaco Developer Standards, the following terms, in addition to their common meaning, are defined:

- a. "City Engineer" shall mean an Engineer employed or contracted by the City on either a part-time or full-time basis.

14.02.030 Minor Revisions Administratively Approved.

The City Engineer is authorized to adopt, administratively, minor revisions to the City of Ilwaco Developer Standards to better implement the Standards or allow for changes in design and construction technology and methods occurring after the effective date of this Ordinance.

14.02.040 Copy on File.

One copy of the City of Ilwaco Developer Standards shall be available in the office of the City Clerk for review and copying by members of the public. Additionally, any minor administrative revisions made by the City Engineer subsequent to the effective date of this Ordinance shall be dated by the City Engineer, and a copy of the revised City of Ilwaco Developer Standards shall be made available in the office of the City Clerk for review and copying by members of the public.

CHAPTER 14.04 STREETS

14.04.010 Purpose.

The purpose of this chapter is to define the requirements for street planning and construction to be followed in the development, review and approval of site plans, subdivisions, short subdivisions and new development in existing plats. (Ord. 627 (part), 1999).

14.04.020 Construction standards and specifications.

- a. Construction and design standards and specifications for streets are contained in the most recent edition of the document entitled "Pacific County Road Standards," and all streets must be completed in accordance with these standards.
- b. Curbs, gutters and sidewalks are required in the city's commercial zones. When required, curbs, gutters and sidewalks must be constructed according to construction and design standards and specifications for curbs, gutters and sidewalks contained in the most recent edition of the document entitled Pacific County road standards.
- c. If a development accesses an existing street or is proposed at the end of an existing street that is not designed to accommodate the expected increase in traffic caused by the new development, then the developer must improve the existing

street leading to the development up to the standards required for the expected increase in traffic (see Section 15.74.050B). Residential developments of up to four units are exempt from this requirement. (Ord. 627 (part), 1999).

14.04.030 Approval of construction drawings required before installation.

- a. The City Engineer must approve construction plans before any right-of-way improvements may be installed.
- b. The right-of-way improvement plans must be prepared by a licensed Engineer on twenty-four (24) inch by thirty-six (36) inch size mylar reproducible sheet for approval by the City Engineer before starting construction.
- c. The City Engineer may require a survey before construction begins. If a survey is required, a copy of the survey must be given to the City. (Ord. 627 (part), 1999).

14.04.040 Inspection of public improvements required before final permits are issued.

The City Engineer or his or her representative must inspect all public improvement work before any final land use permit or building permit is issued. (Ord. 627 (part), 1999).

14.04.050 Street classification.

- a. If a street is dedicated to public use, the street must be classified as provided in subsection B below. Classification will be based on the following considerations:
 1. The projected volume of traffic to be carried by the street, stated in terms of the number of trips per day;
 2. The number of dwelling units to be served by the street may be used as an indicator of the number of trips but is not conclusive;
 3. Whenever a subdivision street continues an existing street that used to end outside the subdivision, the classification of the street will be based upon the street in its entirety, both within and outside of the subdivision.
- b.. The classification of streets must comply with the most current edition of the Pacific County roads standards. The following are road or right-of-way classifications based on the anticipated average daily traffic (ADT) ten years hence:
 1. Major collector (ADT 2000+);
 2. Minor collector (ADT 400-2000);
 3. Access collector (ADT 0-400);

4. Cul-de-sac;
5. Private road. (Ord. 627 (part), 1999).

14.04.060 Street in existing plat used as driveway.

- A. In some existing plats in the City, a street is being used as a driveway because all of the lots created at the time that the area was platted have not yet been built upon.
- b. In these situations in existing plats, if a street is used as a driveway, the property owner using the street as a driveway must improve it to City street standards and the City will maintain it. (Ord. 627 (part), 1999).

14.04.070 Dedications.

- a. Required minimum street right-of-way width is according to construction standards in the Pacific County road standards.
- b. Easements must be provided for all public facilities and utilities as required by the City.
- c. Additional right-of-way may be required to be dedicated as a condition of development approval. In order to conform to minimum standards where developments abut an existing public road or private right-of-way, dedications may be required for extension of the existing public streets or new streets in order to provide continuity with the circulation system. (Ord. 627 (part), 1999).

14.04.080 General layout of streets, blocks, lots and driveways.

- a. All streets must be straight, whenever practicable, to the extent necessary to preserve and continue a grid system.
- b. All subdivisions and site plans must provide direct access to at least one existing improved and publicly-dedicated street.
- c. Proposed streets should extend to the boundary lines of the proposed subdivision in order to provide for the future development of adjacent tracts, unless prevented by natural or manmade conditions, or unless an extension is determined to be unnecessary or undesirable by the decision-making body.
- d. Street patterns should be designed to expedite traffic movement to be able to move heavy emergency vehicles without obstruction.
- e. Blocks must have sufficient width to provide for a maximum of two tiers of lots of appropriate depths (according to zoning standards), unless existing conditions make this requirement impractical in the judgment of the decision-making body.

- f. The maximum length of residential blocks should be six hundred (600) feet, and minimum length should be three hundred (300 feet), unless existing conditions make this requirement impractical in the judgment of the decision-making body.
- g. Streets must be laid out so that the lengths, widths and shapes of blocks adequately address the following:
 - 1. Provision of adequate building sites suitable to the type of use contemplated;
 - 2. The zoning requirements are able to be met on future building permits;
 - 3. The limitations and opportunities of the topography;
 - 4. The needs for convenient access, circulation, control and safety of vehicular and pedestrian traffic are considered.
- h. Lots to be created must comply with the following requirements:
 - 1. Every lot must have access to allow emergency vehicles to enter and exit, as well as for all those likely to need or desire access to the property in its intended use;
 - 2. Lot lines must be at right angles to street lines or radial to curvilinear streets, unless a variation will result in a better street or lot plan in the opinion of the decision-making body;
 - 3. Dimensions of corner lots must be large enough to allow for front yard setbacks off both streets; and
 - 4. Corner lots must be graded to provide sufficient sight clearance at intersections.
- i. If a driveway connects to a City street, the property owner shall maintain the driveway to where it connects with the City street pavement. All driveways to be constructed connecting to the city street must obtain a permit, must be designed and constructed to City standards. All driveway construction connecting to the City street will be inspected by City staff. (Ord. 627 (part), 1999).

14.04.090 Coordination with surrounding streets.

- a. The street system of a new subdivision or in an existing plat where new development is proposed must be coordinated with existing, proposed and anticipated streets outside the subdivision or existing plat (hereafter referred to as “surrounding streets”).
- b. Minor collector streets must intersect with surrounding major collector streets at safe and convenient locations.

- c. Access collector streets must connect with surrounding streets where necessary:
 - 1. To permit the convenient movement of traffic between residential neighborhoods;
 - 2. To facilitate access to neighborhoods by emergency service vehicles; or
 - 3. For other sufficient reasons, but connections will not be permitted where the effect would be to encourage the use of such streets by substantial through traffic.
- d. Whenever connections to anticipated or proposed surrounding streets are required by this section:
 - 1. The street right-of-way must be extended; and
 - 2. The street must be developed to the property line of the subdivided property or existing plat at the point where the connection to the anticipated or proposed street is expected.
- e. In addition, the permit-issuing authority may require temporary turnarounds to be constructed at the end of the streets described in subsection d. above, pending their extension when such turnarounds appear necessary to facilitate the flow of traffic or accommodate emergency vehicles.
- f. No temporary dead end streets in excess of six hundred (600) feet may be created unless no other practicable alternative is available. (Ord. 627 (part), 1999).

14.04.100 Relationship of streets to topography.

- a. Streets must be designed to facilitate drainage and stormwater runoff, and street grades must conform as closely as practicable to the original topography.
- b. The maximum grade at any point on a street must not exceed fifteen (15) percent unless no other practicable alternative is available. However, in no case may streets be constructed with grades that create a substantial danger to the public safety in the professional opinion of the city engineer. (Ord. 627 (part), 1999).

14.04.110 Cul-de-sacs/turnarounds.

Cul-de-sacs and turnarounds on both public and private streets must conform to the construction standards listed in the Pacific County road standards. (Ord. 627 (part), 1999).

14.04.120 Entrances to streets (driveways).

Driveway standards in new subdivisions and new development in existing plats must

conform to the construction standards listed in the Pacific County road standards. (Ord. 627 (part), 1999).

14.04.130 Street intersections.

In addition to the intersection standards outlined in the construction standards listed in the Pacific County road standards, the following standards apply to new subdivisions and new development in existing plats:

- a. Streets must intersect as nearly as possible at right angles, and no two streets may intersect at less than sixty (60) degrees.
- b. Not more than two streets may intersect at any one point, unless the City Superintendent certifies to the permit-issuing authority that such an intersection can be constructed with no extraordinary danger to public safety.
- c. Whenever possible, proposed intersections along one side of a street must coincide with existing or proposed intersections on the opposite side of such street. In any event, where a centerline offset (jog) must occur at an intersection, the distance between centerlines of the intersecting streets must be evaluated and designed according to accepted traffic safety standards. (Ord. 627 (part), 1999).

14.04.140 Public streets and private roads.

For purposes of this subsection, the term “public-street” means and includes a pre-existing public street as well as a street created by a subdivider that meets the public street standards of this chapter and is dedicated for public use. The recording of a plat must dedicate the street. (Ord. 627 (part), 1999)

14.04.145 Private streets.

- a. While community street requirements are usually best served by public streets, owned and maintained by the City, private streets may be appropriate in some instances.
- b. Private streets and roads shall be approved only when they are:
 1. Permanently established by right-of-way, tract or easement providing legal access to each affected lot, dwelling unit or business and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable; and
 2. Serving properties and development that is zoned R-3; and
 3. Maintained by a capable and legally responsible owner or homeowner’s association or the legal entity made up of all benefited property owners, under provisions of Section 15.74.145D; and

4. Designed and built to Pacific County road standards. Pavement width of all private streets shall be twenty-two (22) feet or more; radius of horizontal curves and vertical grade of private streets shall be based upon the topography of the site; any vertical grade in excess of fifteen (15) percent shall be approved by the city engineer; design and construction of private streets shall be subject to the same city engineering inspection and approval as for public streets; modifications to these standards may be granted by the city engineer if adequate consideration of the following factors is made during the plat review:
 - a. Provision of off-street parking,
 - b. Restriction of on-street parking,
 - c. Provision of adequate clearance for emergency vehicles,
 - d. Provision of clear vision at intersections,
 - e. Provision of alternative bicycle and/or pedestrian paths,
 - f. Provision of adequate utility easements outside of street,
 - g. Future street revision or extension is not planned.
5. Provision is made for private streets to be open at all times for emergency and public service vehicles; an easement or other right of access shall be recorded which runs in favor of the city; such right of access shall provide the right of ingress and egress for the city and its employees to carry out any lawful city purpose, including but not limited to fire, police, water and sewer services; such easements shall also provide access to all other urban service providers such as refuse haulers, television cable operators, electric utility providers, emergency medical services and others; and
6. Private streets shall not obstruct public street circulation; and
7. At least one of the following conditions exist:
 - a. Existing abutting development precludes the construction of a public street, or
 - b. Topographic, geological or soil conditions make development of a public street undesirable, or
 - c. The streets are within a private community with a corporate or a functional identity, or
 - d. Neighborhood traffic circulation and lot access can be met more logically by private streets than by public streets, or

- e. Streets are a part of a planned unit development (PUD), or
 - f. Streets serve commercial facilities where no circulation continuity is necessary, or
 - g. The City Engineer and fire department determine that no other access is available and the private street is adequate.
- c. Notice. The following statement is required on the face of any plat, short plat, site plan or binding site plan containing a private street:

City of Ilwaco has no responsibility to improve or maintain private streets contained within or private streets providing access to the property described in this plat. Any private street shall remain a private street unless it is upgraded to public street standards including standards meeting ADA (Americans with Disabilities Act) requirements at the expense of the subdivider or adjoining lot owners to include hard surface paving and is accepted by the City for public ownership and maintenance.

- d. Maintenance Agreement. The City will not maintain roadways, signs or drainage improvements on private streets. A private maintenance covenant recorded with the County Auditor will be required for any private street. The covenant will set out the terms and conditions of responsibility for maintenance, maintenance methods, standards, distribution of expenses, remedies, for noncompliance with the terms of the agreement, right of use easements, and other considerations. The covenant shall be submitted to the City Engineer or his designee for approval prior to recording.

All private streets shall be maintained by the owners of the property served by them and kept in good repair at all times. In order to insure the continued good repair, a declaration of covenant and requiring maintenance of the private street shall be recorded with the Pacific County Auditor's Office concurrent with recording of the subdivision plat.

The covenants shall include the following terms:

1. The covenant shall establish minimum annual assessments in amount adequate to defray costs of ordinary maintenance and procedures for approval of additional needed assessments.
2. The covenant shall include a periodic maintenance schedule.
3. The covenants for maintenance shall be enforceable by any property owner served by the street.
4. The means shall established for assessing maintenance and repair costs equitably to property owners served by the private street.

5. The covenants shall run with the land.
 6. “Maintenance” means and includes, but is not limited to street surfacing, shoulders, gates, signs, pavement markings, street lighting, storm drainage facilities and vegetation control.
 7. The City shall have the right to inspect the condition of private streets and if in the opinion of a licensed professional engineer, the condition of private streets have deteriorated to the level where improvements are needed, the City has the right to order that this work be done. If the property owners associated or the developer do not carry out the improvements in a timely manner, the City has the right to order the improvements.
- e. Street Signs. Private street signs with street designations shall be provided by the developer at the intersection of private streets with private and public streets. Such signs shall meet the specifications of Pacific County road standards and, in the case of intersections with public streets, shall be located within the public right-of-way or within a separate maintenance easement. Road signs shall be included in the maintenance agreement.
 - f. Inspection. Private streets will be subject to the same inspection schedule as public streets.
 - g. Developer Maintenance Obligation. The developer of a residential plat shall be responsible to insure the maintenance of the private street for a period of two years from the date of recording of the plat or short plat. Thereafter, the developer’s maintenance responsibility will depend upon the number of lots under the developer’s continuing ownership, as stated in the recorded maintenance agreement. (Ord. 627 (part), 1999).

14.04.150 Right-of-way improvements and dedication to precede development or building.

- a. Except as noted under subsection c. below, no land use permit or building permit will be issued by the city unless or until the public rights-of-way upon which the subject property abuts are:
 1. Considered fully improved (see subsection b. below) to the standards of the right-of-way classification (as specified in Section 14.04.070); and
 2. Offered for dedication to the public.
- b. The City Engineer will consider subsection a. above fulfilled if the circumstances listed below are met. It will be at the discretion of the City Engineer, based on knowledge of upcoming projects in the vicinity, safety issues or sound engineering judgment, as to which method will be allowed or not allowed.

Improvements will be considered fully installed:

1. Where the rights-of-way are already improved to their classification standards and dedicated to the City;
2. Where the City chooses to purchase rights-of-way and install the improvements. However, under no circumstances is the City obligated to do this;
3. Where the applicant installs the improvements himself at his own cost and offers the rights-of-way to the public;
4. Where the applicant has dedicated the rights-of-way to the public and posted a completion security with the City Engineer in accordance with Section 15.02.130. The completion security will guarantee the completion of road and/or drainage improvements that are required;
5. If subsections b.1—4 above are declared unfeasible by the City Engineer, then improvements will be considered fully installed if the applicant has dedicated the rights-of-way to the public and elected to pay to the City an amount equal to the cost of installing the improvements. In such circumstances, the funds would be maintained in an account to be used specifically for improvements on that right-of-way within the general vicinity of the project;
6. A maintenance security may be required if work is not complete at the time of the first sale of property out of the developer's possession.

c. This section does not apply to:

1. Building permits for additions, alterations or repairs within any twelve (12) month period which does not increase the gross floor space of an existing building or facility by more than fifty (50) percent; or
2. Building permits for residential garages, carports or accessory structures not intended as a dwelling unit. (Ord. 627 (part), 1999).

14.04.160 Attention to disabled persons in street and sidewalk construction.

- a. Whenever curb and gutter construction is used on public streets (see Section 14.04.020B) wheelchair ramps for disabled persons must be provided at intersections and other major points of pedestrian flow.
- b. Wheelchair ramps and depressed curbs must be constructed in accordance with published standards of the Washington State Building Code addressing accessibility. (Ord. 627 (part), 1999).

14.04.170 Street names and house numbers.

- a. Public street names will be assigned by the developer subject to the approval of the permit-issuing authority.
- b. Building numbers will be assigned by the City.
- c. The City Council may by resolution name or rename streets. (Ord. 627 (part), 1999).

14.04.180 Bridges.

Bridges, whether on public roads or private roads, must be designed and constructed to meet minimum requirements set forth in the AASHTO bridge specifications and in accordance with the Pacific County road standards. (Ord. 627 (part), 1999).

14.04.190 Utilities.

Utilities to be located within the street right-of-way must be constructed in accordance with current franchise and permit procedures and in compliance with the Pacific County road standards. (Ord. 627 (part), 1999).

14.04.200 Vacation of public rights-of-way.

Applications for vacations of public rights-of-way will be processed in accordance with Chapter 35.79 RCW and Chapter 15.94 of this title. (Ord. 627 (part), 1999).

14.04.210 Right-of-way permit required.

Before performing any work within a right-of-way, the person performing the work must obtain a right-of-way permit from the City Engineer. The City Engineer may condition the permit as necessary to protect the public health, safety and welfare. (Ord. 627 (part), 1999).

CHAPTER 14.06 UTILITIES

Article 1. General

14.06.010 Utility ownership and easement rights.

When a developer installs or causes the installation of water, sewer, electrical power, telephone, cable television, or other types of utility facilities and intends that the facilities will be owned, operated or maintained by a public utility or other entity, the developer must transfer to the utility or other entity the necessary ownership or easement rights to enable the utility or entity to operate and maintain the facilities. (Ord. 627 (part), 1999).

14.06.020 Right-of-way permit required.

- a. Before performing any work within a right-of-way, the person performing the work must obtain a right-of-way permit from the City Engineer,
- b. The City Engineer may condition the permit as necessary to protect the public health, safety and welfare. (Ord. 627 (part), 1999).

14.06.030 Plan approval required.

- a. Before any new sewer system or water system pipes are installed, a developer must provide plans to the City for review.
- b. The plans provided to the City for review must be prepared by a licensed engineer. (Ord. 627 (part), 1999).

10.06.040 As-built drawings required.

- a. Whenever a developer installs or causes to be installed any utility line within the City, or connects to existing facilities within the City, the developer must furnish the City with four mylar copies of a drawing that shows the exact location of such utility lines as soon as practicable after installation is complete, and before acceptance of any utility line.
- b. The drawings must be verified as accurate by the utility service provider.
- c. Compliance with this requirement is a condition of the continued validity of the permit authorizing the development. (Ord. 627 (part), 1999).

14.06.050 Utilities to be consistent with internal and external development.

- a. Whenever it can reasonably be anticipated that utility facilities constructed in one development will be extended to serve other adjacent or nearby developments, the utility facilities (e.g., water or sewer lines) must be located and constructed so that extensions can be made conveniently and without undue burden or expense or unnecessary duplication of service. In all cases, utility lines must extend to the common property line(s) of the subject property and the property(ies) where future development is anticipated.
- b. All utility facilities must be constructed in a way that will:
 - 1. Minimize interference with pedestrian or vehicular traffic; and
 - 2. Facilitate maintenance without undue damage to improvements or facilities located within the development. (Ord. 627 (part), 1999).

Article II. Sewer

14.06.060 Construction standards and specifications.

- a. All sewage disposal lines must be constructed in accordance with the City of Ilwaco Developer Standards.
- b. Sewage disposal lines and water lines must be separated by at least ten (10) feet. (Ord. 627 (part), 1999).

14.06.070 Serving lots with sewage disposal systems.

If a lot is to have a use on it which requires sewage disposal, then the property owner or developer must install a connecting line to the city sewer line. (Ord. 627 (part), 1999).

14.06.080 Sewage disposal facilities required before construction is complete.

A building or structure requiring sewage disposal must be connected to a City sewer line before the completion of the construction of a building or structure. (Ord. 627 (part), 1999).

14.06.090 Compliance with standards.

- a. All proposed developments:
 - 1. Must comply with standards and specifications of the City; and
 - 2. Must meet the intent of the most recent edition of the City's general sewer plan.
- b. The City Engineer must certify to the City that the proposed system meets the City's requirements and will be accepted by the City.
- c. The State Department of Ecology may also have to approve connections to the City's sewer system.
- d. Commercial facilities that elect to meter wastewater outflow in lieu of metering water inflow must install a sewer flow meter. The meter shall be installed at the owner's expense according to City standards, and must be approved by the Public Works Supervisor. Any maintenance or replacement of the meter will be at the owner's expense. (Ord. 812 § 1 (part), 2012; Ord. 627 (part), 1999).

14.06.100 Conveyance of facilities to the City.

- a. The following criteria must be met, unless otherwise waived by the City Engineer, before sewer facilities are conveyed to the City:
 - 1. A public utility easement of adequate dimensions must be concurrently granted to the City.

2. The facilities must be inspected for conformance with the Ilwaco standards specified in the latest addition of the APWA standard specifications for public sewer facilities. The city engineer may require any test to demonstrate conformance. Tests may include, but are not limited to, infiltration, exfiltration, air tests or a combination of tests. The applicant must notify the City Engineer when the sewer facility is ready for inspection.
 3. The applicant must pay all required fees.
 4. The City Engineer may require the developer to post a maintenance bond (in accordance with subsection B below) to cover the cost of replacing or repairing any of the facilities for a period of two years.
- b. If a maintenance security is required by the City Engineer, the applicant must deposit with the City a maintenance bond or other acceptable surety to cover the cost of replacing or repairing any or all required improvements and to warrant against defects in labor and material, and against any damage or defects caused by construction activity on the site, for a period of two years from acceptance of improvements by the City. The maintenance security must be one of the following:
1. A surety bond executed by a surety company authorized to transact business in the state in a form approved by the City Attorney;
 2. A personal bond approved by the City Attorney cosigned by at least one additional person together with evidence of financial responsibility and resources of those signing the bond sufficient to provide reasonable assurance of ability to proceed in accordance with the agreement;
 3. Cash;
 4. A letter of credit approved by the City Attorney from a financial institution stating that the money is held for the purposes of development of the stated project.
- c. The bond or other approved surety will be for twenty (20) percent of the estimated value of all the required improvements as determined by the City Engineer.
- d. Before the warranty period ends, and upon restoration of the improvements to successful operation and the repair of any defects or damage in the improvements, the mayor will authorize the release of the maintenance bond.
- e. The Mayor may withhold release of the bond or surety up to one year from the date of any restoration or repairs to ensure that the restoration or repairs were adequate.
- f. The Mayor and the applicant must sign a notarized security agreement, approved

in form by the City Attorney, in accordance with Section 15.02.130.

- g. When sewer facilities are accepted by the City, the developer must provide the City Engineer with as-built drawings of the sewer facilities, signed, stamped and acknowledged by a licensed Engineer. (Ord. 627 (part), 1999).

14.06.110 Side sewer permits required.

- a. A developer must obtain a side sewer permit for any connection to the City sewer system.
- b. A permit which includes side sewer work in a public area or the connection with or opening into any public sewer other than through the normal connection point of a "Y," "T," or stub, will only be issued to a registered side sewer contractor or qualified City employee.
- c. A permit which includes side sewer work on private property will only be issued to:
 - 1. The owner of the property (but such permit does not allow the owner to connect the side sewer to a public sewer except through the normal opening of a "Y," "T," or stub under the supervision of the City Engineer or his representative);
 - 2. A registered sewer contractor; or
 - 3. A qualified city employee.
- d. Side sewer permits are not transferable. No authorized person, including any sewer contractor or qualified City employee, may lay any pipe pursuant to any other person's permit.
- e. No permit will be issued for side sewer connection before the main sewer is accepted by the City. (Ord. 627 (part), 1999).

14.06.120 Costs of side sewer borne by owner.

- a. The property owner must pay all costs and expenses related to the installation and connection of the side sewer, as well as the cost of repairs when:
 - 1. There is a break or blockage in the side sewer within private property or within the building plumbing.
 - 2. The blockage is located within the public right-of-way or easement and is caused by one (1) or more of the following:
 - a. Roots from trees or shrubs located outside public right-of-way or easements.

- b. Side sewer or mainline is blocked from sewage contents originating from private property.
 - c. Side sewer within the public right-of-way or easement is blocked by debris originating from a break in the side sewer within private property.
 - d. An investigation revealed that the source of the blockage originated from private property including adjacent private properties.
- b. The owner must indemnify the City from any loss or damage that may directly or indirectly be caused by the installation of the side sewer. (Ord. 812 § 1 (part), 2012; Ord. 627 (part), 1999).

14.06.130 Side sewer permitting process.

- a. Side sewer permits will be issued by the City Engineer.
- b. The applicant for a side sewer permit must supply the City Engineer with the following information, on a form provided by the City:
 - 1. Owner's name;
 - 2. Address of property to be served;
 - 3. Owner's mailing address;
 - 4. Name and address to which bills must be sent;
 - 5. Registered side sewer contractor's or qualified city employee's name and proof of qualification;
 - 6. Legal description of the property to be served;
 - 7. All outside dimensions of building to be served;
 - 8. Location of buildings on property to be served;
 - 9. Purpose of building; and
 - 10. Alignment of the proposed side sewer.
- c. All required fees must be paid before any side sewer permit is issued. Such fees may include, but are not limited to: permit fees, stub fees, general facilities

connection charges, in-lieu-of-assessment charges, reconnection charges, and/or any other charges (outstanding or otherwise) associated with the permit or the property.

- d. The permit card must be posted on the job before starting the work and must be readily accessible to the City Engineer.
- e. The installer of the side sewer must meet with the inspector on the job whenever so directed.
- f. No side sewer may be backfilled before approval of the City Engineer. (Ord. 627 (part), 1999).

14.06.140 Side sewer contractor registration required.

- a. To assure safe and quality construction of side sewers, and safe and quality connection of side sewers to the public sewers of the city, no person, other than the owner of the property involved, may construct, install, repair, reconstruct, excavate or connect to the public sewers of the city any side sewer, unless he or she is:
 - 1. A side sewer contractor holding a valid, unsuspended current certificate of registration issued by the Department of Licenses of the State (pursuant to Chapter 18.27 RCW); or
 - 2. A qualified employee of the City.
- b. All such registered side sewer contractors and/or qualified City employee:
 - 1. Must adhere at all times to the then-current requirements of the City relating to side sewers, connections to public sewers, and side sewer contractors, including reasonable requirements of the City Engineer relating to construction, installation, reconstruction and repair of side sewers; and
 - 2. Will be liable for all damage to the public sewers and sewage treatment plant of the City. (Ord. 627 (part), 1999).

14.06.150 Each side sewer to have individual side sewer connection, unless exception granted.

- a. Not more than one primary structure may be connected to the sewer system by a single connection unless an exception is granted by the City Engineer before the construction of such connection.
- b. If more than one primary structure is connected to the public sewer system by a

single connection, a mutually beneficial easement must be granted to the respective properties over the shared portions of the connection, thus assuring that all properties involved will have perpetual use of the side sewer. Provisions must also be made for maintenance and access for repair. The property owner must:

1. Record the easement(s) with the County Auditor; and
2. Give a copy to the City. (Ord. 627 (part), 1999).

14.06.160 Protection of excavations—Restoration of public property.

- a. All excavations for side sewer installations must be adequately guarded with barricades and lights so as to protect the public from hazard.
- b. Streets, sidewalks, parkways, and other public property disturbed in the course of the work must be restored in a manner satisfactory to the City.
- c. Any trench settlement within public right-of-way must be repaired by the property owner upon notification by the City. If the property owner fails to repair the trench, the City will make repairs and bill the property owner for the cost of the repairs. (Ord. 627 (part), 1999).

Article III. Water

14.06.170 Construction standards and specifications.

- a. All water distribution lines must be constructed in accordance with the most current edition of the APWA standard specifications; and
- b. Sewage disposal lines and water lines must be separated by at least ten (10) feet. (Ord. 627 (part), 1999).

14.06.180 Water system required.

Every principal use and every lot within a subdivision or in any existing plat must be served by a water supply system that:

- a. Is adequate to accommodate the reasonable needs of the use or subdivision lot; and
- b. Complies with all laws of the Washington State Department of Health and all City ordinances. (Ord. 627 (part), 1999).

14.06.190 Compliance with standards.

- a. All proposed developments shall comply with standards and specifications of the City and must meet the intent of the most recent edition of the City's comprehensive water plan. The City Engineer must certify to the City that the

proposed water system meets the City's requirements and will be accepted by the City.

- b. In order to obtain a building permit for certain uses applicants shall supply evidence of adequate water supply, as required by RCW 19.27.097.
- c. Minimum plumbing fixtures and sanitation facilities to be provided in an occupancy shall be in accordance with WAC 51-50-2900. Water meters shall be sized according to the Uniform Plumbing Code (UPC) per Chapter 15.84.

A property owner may appeal the required meter size based on the determination of a qualified licensed professional paid for by the property owner and approved by the City.

- d. For construction after the adoption of this chapter, shared meters will not be permitted. If an existing building with multiple spaces has only one (1) meter, meters must be added for each space in the event of a significant remodel requiring a building permit. (Ord. 812 § 1 (part), 2012; Ord. 627 (part), 1999).

14.06.200 Conveyance of facilities to the City.

- a. The following criteria must be met, unless otherwise waived by the City Engineer, before water facilities are conveyed to the City:
 - 1. A public utility easement of adequate dimensions must be concurrently granted to the City.
 - 2. The facilities must be inspected for conformance with the City of Ilwaco Developer Standards and the APWA standard specifications for public water facilities. The City Engineer may require any test to demonstrate conformance. The applicant must notify the City Engineer when the water lines are ready for inspection.
 - 3. The applicant must pay all required fees.
 - 4. The City Engineer may require the applicant to post a maintenance bond (in accordance with subsection b. below) to cover the cost of replacing or repairing any of the facilities.
- b. If a maintenance security is required by the City Engineer, the applicant must deposit with the city a maintenance bond or other acceptable surety to cover the cost of replacing or repairing any or all required improvements and to warrant against defects in labor and material, and against any damage or defects caused by construction activity on the site, for a period of two years from acceptance of improvements by the City. The maintenance security must be one of the following:

1. A surety bond executed by a surety company authorized to transact business in the state in a form approved by the City Attorney;
 2. A personal bond approved by the City Attorney cosigned by at least one additional person together with evidence of financial responsibility and resources of those signing the bond sufficient to provide reasonable assurance of ability to proceed in accordance with the agreement;
 3. Cash;
 4. A letter of credit approved by the City Attorney from a financial institution stating that the money is held for the purposes of development of the stated project.
- c. The bond or other approved surety will be for twenty (20) percent of the estimated value of all the required improvements as determined by the City Engineer.
 - d. When the warranty period ends, and upon restoration of the improvements to successful operation and the repair of any defects or damage in the improvements, the City Engineer will authorize the release of the maintenance bond.
 - e. The City Engineer may withhold release of the bond or surety up to one year from the date of any restoration or repairs to insure that the restoration or repairs were adequate.
 - f. The Mayor and the applicant must sign a notarized security agreement, approved in form by the City Attorney, in accordance with Section 15.02.130.
 - g. When water facilities are accepted by the City, the developer must provide the City Engineer with as-built drawings of the water facilities, signed, stamped and acknowledged by an Engineer. (Ord. 627 (part), 1999).

14.06.210 Licensed plumber required to make connections.

All water line connections must be made by a licensed plumber. (Ord. 627 (part), 1999).

14.06.220 Costs borne by owner.

- a. The property owner must pay all costs and expenses related to the installation and connection of the water lines, as well as the cost of repairs from the backside of the meter to the building or for repairs on any water line not conveyed to the City.
- b. The owner must indemnify the City from any loss or damage that may directly or indirectly be caused by the installation of the water lines. (Ord. 812 § 1 (part), 2012; Ord. 627 (part), 1999).

14.06.230 Make application to connect to City water system.

- a. Before connecting to the City water system, a property owner or developer must:
 1. Make application; and
 2. Pay the water connection fee.
- b. The City will install a water meter and the connection will be made once the fee has been paid.
- c. No water line trenches may be backfilled before approval of the City Engineer. (Ord. 627 (part), 1999).

14.06.240 Each lot to have individual water connection, unless exception granted.

- A. Not more than one primary structure may be connected to the water system by a single connection unless an exception is granted by the City Engineer before the construction of such connection.
- b. If more than one primary structure is connected to the public water system by a single connection, a mutually beneficial easement must be granted to the respective properties over the shared portions of the connection, thus assuring that all properties involved will have perpetual use of the water line. Provisions must also be made for maintenance and access for repair. The applicant must:
 1. Record the easement(s) with the County Auditor; and
 2. Give a copy to the City. (Ord. 627 (part), 1999).

14.06.250 Protection of excavations—Restoration of public property.

- a. All excavations for water line installations must be adequately guarded with barricades and lights so as to protect the public from hazard.
- b. Streets, sidewalks, parkways, and other public property disturbed in the course of the work must be restored in a manner satisfactory to the City.
- c. Any trench settlement within public right-of-way will be repaired by the property owner upon notification by the city. If the property owner fails to repair the trench, the City will make repairs and bill the property owner for the repairs. (Ord. 627 (part), 1999).

Article IV. Other Utilities

14.06.260 Construction standards and specifications.

Construction and design standards and specifications for the components of utilities other

than sewer and water are to be constructed in accordance with current franchise and permit procedures and in compliance with the most recent edition of the Pacific County road standards. (Ord. 627 (part), 1999).

14.06.270 Lighting requirements.

- a. Subject to subsection b. below, all public streets, sidewalks, and other common areas or facilities in subdivisions created after the effective date of this chapter must be sufficiently illuminated to ensure the security of property and the safety of persons using such streets, sidewalks, and other common areas or facilities.
- b. All entrances and exits in substantial buildings used for nonresidential purposes and in multifamily residential developments must be adequately lighted to ensure the safety of persons and the security of the buildings.
- c. All outdoor lights must be low sodium or similar lamp type and be down-shielded to prevent light pollution.
- d. Lighting within any lot that unnecessarily illuminates any other lot or public right-of-way and substantially interferes with the use or enjoyment of such other lot or public right-of-way is prohibited.
- e. Lighting for automated teller machines or night deposit facilities must be provided in accordance with RCW 19.174.050. (Ord. 627 (part), 1999).

14.06.280 Electric power.

Every principal use and every lot within a subdivision or existing plat must have available to it a source of electric power adequate to accommodate the reasonable needs of the use or lot. (Ord. 627 (part), 1999).

14.06.290 Telephone services.

Every principal use and every lot within a subdivision or existing plat must have available to it a telephone service cable adequate to accommodate the reasonable needs of the use or lot. (Ord. 627 (part), 1999).

14.06.300 Underground utilities.

- a. Except as noted in subsections d.—f. of this section below, all new electric power lines (not to include transformers or enclosures containing electrical equipment including, but not limited to, switches, meters or capacitors which may be pad mounted), telephone, cable television, and other communication lines installed must be placed underground in accordance with the specifications and policies of the respective utility service providers.
- b. Utilities within the right-of-way on new roads must be installed in accordance

with the most recent edition of the Pacific County roads standards. If the distribution line originates from a point opposite any public roadway from the new construction, the service lines must be placed under the roadway by means of boring or surface excavation across the roadway.

- c. For new development in existing plats or for infill development, utilities may be installed above ground, with the approval of the city engineer and the respective utility service provider.
- d. If the respective utility provider determines that an underground system cannot reasonably be installed according to accepted engineering practices, the requirements of this section may be waived upon receipt of a written notice from the City Engineer. The waiver must be noted in the permit or it will be considered as not being granted. If undergrounding is not determined to be feasible, the applicant must either sign a concomitant agreement or a no protest agreement of the formation of an LID for future undergrounding. Determination of which form of promissory will be used is at the discretion of the City Engineer.
- e. Nothing in this section nor any other section in relation to underground utilities applies to power lines carrying a voltage of 15 kV or more.
- f. Nothing in this section nor any other section in relation to underground utilities prohibits the placement of mounted transformers, terminal pedestal, or other electrical and communications devices above ground, as determined by the appropriate service utility provider involved. (Ord. 627 (part), 1999).

14.06.310 Sites for and screening of dumpsters.

- a. Every development which is or will be required to provide one or more dumpsters for solid waste collection under the city's solid waste collection policies must provide sites for such dumpsters that are:
 - 1. Located so as to facilitate collection and minimize any negative impact on persons occupying the development site, neighboring properties, or public rights-of-way; and
 - 2. Constructed according to specifications established by the City Engineer to allow for collection without damage to the development site or the collection vehicle.
- b. All Dumpsters must be screened if and to the extent that, in the absence of screening, they would be clearly visible to:
 - 1. Persons in any dwelling unit on residential property other than that where the Dumpster is located; or,
 - 2. Occupants or customers in any building on nonresidential property other than that where the Dumpster is located, unless the other property is used

primarily for purposes permitted exclusively in the light industrial district;
or

3. Persons traveling on any public street, sidewalk, or other public way. (Ord. 627 (part), 1999).

CHAPTER 14.08 DRAINAGE, EROSION CONTROL AND STORMWATER MANAGEMENT

14.08.010 Natural drainage system utilized to extent feasible.

- a. To the extent practicable, all development must conform to the natural contours of the land and natural and pre-existing human-made drainage ways must remain undisturbed.
- b. To the extent practicable, lot boundaries must coincide with natural and pre-existing human-made drainage ways within subdivisions to avoid the creation of lots that can be built upon only by altering such drainage ways. (Ord. 627 (part), 1999).

14.08.020 Developments must drain properly.

- a. All developments must be provided with a drainage system that is adequate to prevent the undue detention or retention of surface water on the development site. Surface water will not be regarded as unduly detained or retained if:
 1. The detention or retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or stormwater runoff control plan; or
 2. The detention or retention is not substantially different in location or degree than that experienced by the development site in its predevelopment state, unless such detention or retention presents a danger to health or safety.
- b. No surface water may be channeled or directed into a sewer line.
- c. Whenever practicable, the drainage system of a development must coordinate with and connect to the drainage systems or drainage ways on surrounding properties or streets.
- d. Construction specifications for drainage swales are contained in the most recent edition of the Pacific County road standards. (Ord. 627 (part), 1999).

14.08.030 Stormwater management.

All developments must be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of the developments. More specifically:

- a. No development may be constructed or maintained so that the development unreasonably impedes the natural flow of water from higher adjacent properties across the development, resulting in substantial damage to the higher adjacent properties; and
- b. No development may be constructed or maintained so that surface waters from the development are unreasonably collected and channeled onto lower adjacent properties, resulting in a volume and/or rate that is substantially greater than the predevelopment volume and/or rate. (Ord. 627 (part), 1999).

14.08.040 Erosion control and sedimentation.

- a. Erosion control and water quality control facilities for projects that disturb over five acres must apply to the State Department of Ecology for an NPDES permit.
- b. Erosion control plans are required as a component of the site plan for all plats and all projects which require site plan review. Erosion control plans may include practices such as using straw bales, hydroseeding, etc.
- c. Development of the land may not begin (and no building permits may be issued) until the City Engineer approves the erosion control plan.
- d. For purposes of this section, “disturb” means any use of the land by any person in any development, and/or road construction and maintenance that results in a change in the natural cover or topography that may cause or contribute to sedimentation. Sedimentation occurs whenever solid particulate matter, mineral or organic, is transported by water, air, gravity or ice from the site of its origin. (Ord. 627 (part), 1999).

14.08.050 Stormwater system design.

- a. Storm sewers constructed within the street will be sized by the developer’s Engineer and will consider all potential runoff requirements within the site and upstream of the site.
 - 1. The storm sewer will be sized for a one hundred (100) year design recurrence criteria for storm drainage facilities.
 - 2. The minimum size of storm sewers is eight inches in diameter.
 - 3. Spacing of catch basins along the street must conform to published engineering recommendations, which consider profile of the street and street width.
- b. On-site detention may be required for new development where downstream deficiencies exist or are anticipated to exist in the next five years. Development that will be less than five thousand (5,000) square feet of impervious surface is exempt from detention requirements. The square footage considers the total

development of the property including the future potential impervious surface. Recommended design recurrence criteria for a commercial or residential storm drainage detention facility is a ten (10) year interval. (Ord. 627 (part), 1999).

14.08.060 Illegal discharge of materials into the stormwater system.

The discharge of any material other than stormwater into the stormwater system is prohibited. (Ord. 627 (part), 1999).

CHAPTER 14.14 BUILDINGS AND CONSTRUCTION

14.14.010 Washington State Building Codes adopted.

The model codes listed below, as approved and adopted by the State Building Code Council (SBCC), together with any amendments or additions, are adopted by this reference. These codes apply to all new construction, remodeling or repairs. Copies of the codes are on file in the offices of the City Clerk-Treasurer and the Building Inspector.

- a. Uniform Building Code (UBC) and Standards;
- b. Uniform Plumbing Code (UPC) and Standards;
- c. Uniform Mechanical Code (UMC) and Standards;
- d. Uniform Swimming Pool, Spa and Hot Tub Code;
- e. Uniform Code for the Abatement of Dangerous Buildings;
- f. Washington State Barrier Free Regulations;
- g. Washington State Energy Code;
- h. Washington State Ventilation and Indoor Air Quality Code;
- i. Washington State Historic Building Code;
- j. Uniform Building Code Appendix Chapter 15 (Reroofing);
- k. Uniform Building Code Appendix Chapter 33 (Excavation and Grading);
- l. Uniform Building Code Appendix Chapter 34, Division 1 (Life Safety Requirements For Existing Buildings Other Than High-Rise Buildings). (Ord. 627 (part), 1999).

14.14.020 Duties of the Building Inspector.

The duties of the Building Inspector are described in the model codes listed in Section 14.14.010. (Ord. 627 (part), 1999)

14.14.030 Building permits.

- a. No building or other structure may be erected, moved, added to or structurally altered without a permit issued by the Building Inspector. No building permit may be issued except in conformity with the provisions of this title.
- b. When required by the Building Inspector, all applications for building permits must be accompanied by plans in duplicate, drawn to scale, showing:
 - 1. The actual dimensions and shape of the lot to be built upon;
 - 2. The exact sizes and location of existing buildings on the lot, if any; and
 - 3. The location and dimensions of the proposed building or alteration.
- c. The application must include such other information as lawfully may be required by the Building Inspector, including:
 - 1. Existing or proposed building or alteration;
 - 2. Existing or proposed uses of the building and land;
 - 3. The number of families, housekeeping units, or rental units the building is designed to accommodate;
 - 4. Conditions existing on the lot; and
 - 5. Other matters as may be necessary to determine conformance with, and provide for the enforcement, of this title.
- d. One copy of the plans will be returned to the applicant by the Building Inspector after marking the copy approved or disapproved and signing the copy. The second copy of the plans will be retained by the Building Inspector.
- e. If work described in any building permit has not begun within one hundred eighty (180) days from the date of issuance of the permit, the permit will expire, the permit will be canceled by the Building Inspector, and written notice that the permit has expired will be given to the applicant. (Ord. 627 (part), 1999)

14.14.040 Building permit fees.

Building permit fees are set by resolution. (Ord. 627 (part), 1999).

14.14.050 Side sewer permit.

No building permits for primary use structures will be issued without the applicant having first secured a side sewer permit per Section 14.06.110. (Ord. 627 (part), 1999).

14.14.060 Only construction in compliance with approved plans authorized.

- a. Building permits issued on the basis of plans and applications approved by the Building Inspector authorize only the construction set forth in such approved plans and application and no other construction.
- b. Construction different than that authorized will be considered a violation of this title and punishable as provided by Section 15.02.130. (Ord. 627 (part), 1999).

14.14.070 Accessory buildings.

Accessory buildings may not be constructed before construction of the main building. (Ord. 627 (part), 1999).

14.14.080 Fences.

- a. Building permits are required for all fence construction six feet and over in height.
- b. No fence on a corner lot may interfere with a driver's ability to see at an intersection. Fences on corner lots may not be more than forty-two (42) inches above street grade. (Ord. 627 (part), 1999).

14.14.090 Retaining walls.

- a. Building permits are required for all retaining walls over four (4) feet in height, measured from the bottom of the footing.
- b. All retaining walls over eight feet in height must be designed, stamped and acknowledged by a professional engineer licensed by the state. (Ord. 627 (part), 1999).

14.14.100 Signs.

Sign permits are required for sign installations and must comply with the regulations of Chapter 15.45. (Ord. 627 (part), 1999).

14.14.110 Repairs and maintenance.

Nothing in this title prevents the strengthening or restoring to a safe condition of any building or structure declared unsafe by any official charged with protecting public safety. (Ord. 627 (part), 1999).

14.14.120 Inspection of improvements.

- a. Before signing off the final inspection, the Building Inspector will inspect all improvements installed as a requirement of this title or as a condition of permit on

or adjacent to the site.

- b. Any improvements found to be damaged by the builder must be repaired before receiving final inspection sign-off. (Ord. 627 (part), 1999).

CHAPTER 14.16 FIRE CODE

14.16.010 Uniform Fire Code adopted.

The model codes listed below, as approved and adopted by the State Building Code Council (SBCC), together with any amendments or additions, are adopted by this reference. The Uniform Fire Code applies to all new construction, remodeling or repairs. Copies of the Uniform Fire Code are on file in the offices of the city clerk-treasurer and the building inspector.

- a. Uniform Fire Code (UFC) and Standards;
- b. Uniform Fire Code Appendix Chapter 11-B (Protection of Flammable and Combustible Liquid Tanks in Locations Subject to Flooding); and
- c. Uniform Fire Code Appendix Chapter 11-F (Protected Aboveground Tanks for Motor Vehicle Fuel-Dispensing Stations Outside Buildings). (Ord. 627 (part), 1999).

14.16.020 Applicability.

- a. The provisions of this chapter apply to all commercial buildings constructed or developed within the city limits, when the buildings will be served by water mains and fire hydrants capable of delivering the required water, unless specifically exempted by this chapter, or unless waived or modified by the fire chief pursuant to Section 14.16.090.
- b. Decisions of the fire chief are considered to be made in the best interest, and with the concurrence, of an affected fire district in the absence of any credible evidence to the contrary. (Ord. 627 (part), 1999).

14.16.030 Fire Chief approval prior to issuance of permits.

No permit subject to this chapter will receive final approval until the Fire Chief has verified that the provisions of this chapter are satisfied. (Ord. 627 (part), 1999).

14.16.040 Hydrants to be served by City.

All water mains and fire hydrants required by this chapter must be served by the City water system. (Ord. 627 (part), 1999).

14.16.050 Hydrant standards.

Every development must include a system of fire hydrants sufficient to provide adequate fire protection for the buildings located or intended to be located within the development. The following hydrant standards apply unless waived or modified pursuant to Section 14.16.090:

- a. Any new hydrant installations must comply with the most recent edition of the document entitled “Conditions and Standards for Connecting to the City’s Water System.”
- b. Spacing.
 - 1. Within areas exclusively developed for residential occupancy, maximum distance from a fire hydrant to an access point of any lot is three hundred (300) feet along a roadway.
 - 2. The maximum distance between hydrants in residential areas is no greater than six hundred (600) feet.
 - 3. For all other occupancy types, the maximum distance from a fire hydrant to the access point of the lot is one hundred fifty (150) feet along a roadway.
 - 4. When any portion of a commercial building is more than one hundred fifty (150) feet from the water supply on a public street and when required by the Fire Chief, on-site fire hydrants and mains capable of supplying the required fire flow must be provided. Water supply may consist of reservoirs, pressure tanks, elevator tanks, water mains, or other fixed systems capable of supplying the required fire flow as approved by the Fire Chief and City.
- c. Location.
 - 1. Whenever possible, hydrants must be located at street intersections, provided that when such location results in spacing distances greater than allowed by this chapter, additional hydrants may be required between intersections; provided further, that when the required fire flow is greater than two thousand five hundred (2,500) GPM, the number and location of hydrants will be determined by the city and approved by the Fire Chief.
 - 2. Fire apparatus access roads must be provided and maintained in accordance with the most recent edition of the Pacific County roads standards.
 - 3. When fire protection facilities are installed by the developer pursuant to Section 901.3 of the UFC, the facilities must be installed before any combustible construction is installed on-site.

4. Water mains and fire hydrants must be capable of delivering the required fire flow to the site and will remain the responsibility of the developer until accepted by the City.
 5. When alternate provisions are provided pursuant to Section 14.16.090 the above requirements may be waived or modified.
 6. When locating hydrants, consideration will be given to hazardous operations and the practicality of sound fire service practices (fences, roadways, barriers to operation, etc.), the recommended location preferred by the City, and the required ten (10) foot vehicle clear zone on each side of each hydrant.
- d. Additional Location Requirements for Commercial Buildings.
1. The minimum number of public and private hydrants required will be determined by dividing the required fire flow for the building by one thousand five hundred (1,500).
 2. Hydrants may be located no closer than fifty (50) feet to and no more than three hundred (300) feet from a building.
 3. No hydrant may be located more than one hundred fifty (150) feet from a sprinkler or standpipe connection.
- e. Installation.
1. Hydrants must stand plumb and be set to the finished grade.
 2. The bottom of the lowest outlet of the hydrant must be no less than twelve (12) inches above the grade.
 3. There must be a thirty-six (36) inch radius of clear area about the hydrant for the operation of a hydrant wrench on the outlets and the control valve.
 4. The pumper port must face the street or, where the street cannot be clearly identified, must face the most likely location of a fire truck while pumping, as determined by the Fire Chief.
- f. Fire hydrants must be protected from damage.
1. Internal maintenance of public fire hydrants is the responsibility of the City.
 2. Private hydrants must be protected and maintained in accordance with the Uniform Fire Code. (Ord. 627 (part), 1999).

14.16.060 Piping and flow standards.

The following standards relating to water mains, hydrant branches, and fire flow apply to all new development in the City unless waived or modified, pursuant to Section 14.16.090:

- a. Hydrant branches must not have a domestic supply outlet and must meet the design standards of the City (see Chapter 14.06).
- b. New or replaced water mains serving fire hydrants must meet the design standards of the City (see Chapter 14.06).
- c. Flow Requirements.
 1. Service mains supplying hydrants must be designed to provide not less than five hundred (500) GPM at twenty (20) pounds per square inch residual pressure over and above the computed maximum daily domestic consumption for the period of time specified in the Washington Survey and Rating Bureau's Grading Schedule, Table 4.
 2. In addition, service mains supplying hydrants must provide the fire flow required to each building covered at the number of gallons per minute specified in UFC Appendix IIIA, except as to single dwellings. The Fire Chief may require construction in compliance with design from a registered professional engineer in order to assure that the required fire flow will be achieved. (Ord. 627 (part), 1999).

14.16.070 Plan approval required.

- a. Before any new hydrants or mains serving hydrants are installed, the developer must provide plans, prepared by a licensed engineer, for review by the City.
- b. Upon completed installation and acceptance by the City, the developer must give the Fire Chief two copies of the accurate and identifiable as-built drawings or plans showing the location of all mains, hydrant branches, valves and fire hydrants installed. (Ord. 627 (part), 1999).

14.16.080 Plan review.

- a. The Fire Chief must certify that the plans have been reviewed before a development permit for any new or substantially-altered commercial building, plat development or residential complex is issued.
- b. If the plans are in compliance with this chapter, a notice of approval for issuance of a building permit will be forwarded to the Building Inspector. The approval will be based on the provisions of this chapter being satisfied before the start of any construction. (Ord. 627 (part), 1999).

14.16.090 Waiver and modification.

- a. Subject to acceptance by the City, the Fire Chief may grant a waiver or modification to the standards contained in Sections 14.16.050 and 14.16.060 if:
 1. Strict compliance with the standards would create a substantial hardship on the applicant; and
 2. A waiver or modification does not result in inadequate fire protection.
- b. Waivers or modifications must:
 1. Be in writing;
 2. State the reasons for the waiver or modification; and
 3. Be provided to the fire district that has jurisdiction over the project. (Ord. 627 (part), 1999).

14.16.100 Obstruction prohibited.

- a. Obstructing the view of a fire hydrant by any means for a distance of fifty (50) feet from any direction of vehicular approach is prohibited.
- b. Any violation of this section is declared a public nuisance, subject to immediate abatement and subject to Section 15.02.140. (Ord. 627 (part), 1999).

SECTION 3. SEVERABILITY.

If any section, sentence, or phrase of this Ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

SECTION 4. PUBLICATION AND SUMMARY.

This Ordinance or summary thereof consisting of the title shall be published in the official newspaper of the City.

SECTION 5. EFFECTIVE DATE.

This Ordinance shall be in full force and effect five (5) days after publication of the summary consisting of the title.

PASSED BY THE CITY COUNCIL OF THE CITY OF ILWACO, AND SIGNED IN AUTHENTICATION OF ITS PASSAGE THIS XX DAY OF _____, 2014

Mike Cassinelli, Mayor

ATTEST:

Ariel Smith, Deputy City Clerk

VOTE	Jensen	Karnofski	Marshall	Chambreau	Forner	Cassinelli
Ayes						
Nays						
Abstentions						
Absent						

PUBLISHED:

EFFECTIVE:

CHAPTER 1

INTRODUCTION

These standards shall apply to all improvements within the public right-of-way and/or public easements, to all improvements required within the proposed public right-of-way of new subdivisions, for all improvements intended for ownership, operations on maintenance by the City and for all other improvements (on or offsite) for which the City Code requires approval from the City's Public Works Superintendent, City Planner, Fire Chief, and/or the City Council as appropriate. These standards are intended as guidelines for designers and developers in preparing their plans and for the City in reviewing plans. Where minimum values are stated, greater values should be used whenever practical; where maximum values are stated, lesser values may be used, with City approval, where practical. The developer/proponent is however cautioned that higher standards and/or additional studies and/or environmental mitigation measures may, and will, in all likelihood, be imposed by the City when developing on, in, near, adjacent, or tributary to sensitive areas to include, but not be limited to, steep embankments, creeks, ponds, lakes, certain wildlife habitat, unstable soils, etc.

Alternate design standards will be accepted when it can be shown, to the satisfaction of the City, that such alternate standards will provide a design equal to or superior to that specified. In evaluating the alternate design, the City shall consider appearance, durability, ease of maintenance, public safety and other appropriate factors.

Any improvements not specifically covered herein by these Standards must meet or exceed the current version of the Standard Specification for Road, Bridge & Municipal Construction, State of Washington, and current amendments thereto, revised as to form to make reference to Local Governments. Said specifications shall be referred to hereafter as the "Standard Specifications". Where improvements are not covered by these details, by the Standard Specifications or by the standard details, the City will be the sole judge in establishing appropriate standards. Where these "standards" conflict with any existing City ordinances or discrepancies exist within the body of this text, the higher "standards" shall be utilized as determined by the Public Works Superintendent.

Plans for major improvements in the public right-of-way, within public easements, or improvements to be "deeded" or "gifted" to the City, shall bear an approval signature from the City. Absent such an authorized approval, said attempted transfer of property to the City shall be invalid.

The designer shall submit calculations or other appropriate materials supporting the design of utilities, pavements and storm drainage facilities. The designer shall submit calculations for structures and other designs when requested by the City Engineer and/or

Building Official.

1. Definitions (as used herein)

- (a) "Developer". The party having an agreement with the City to cause the installation of certain improvements, to become a part of the City's utility and/or roadway system upon completion and acceptance. The term shall also include the Developer's contractor employed to do the work or the Contractor's employees.
- (b) "Development" shall mean the construction, reconstruction, conversion, structural alteration, relocation, enlargement, or change in use of any structure or property, or any project which will increase vehicle trips per day during peak hour traffic, or any project which negatively impacts the service level, safety, or operational efficiency of serving roads.
- (c) "Plans" mean drawings, including reproductions thereof, of the work to be done as an extension to the City's water distribution system, prepared by an Engineer licensed in the State of Washington.
- (d) "Specifications" means the directions, provisions, and requirements designated by an Engineer licensed in the State of Washington for the performance of the work and for the quantity and quality of materials, as contained or referenced herein.
- (e) "Performance Bond" means a bond furnished by the Developer and written by a corporate body qualified to write surety in the State of Washington, guaranteeing that the work will be completed in accordance with the plans and specifications.
- (f) "Maintenance Bond" means a bond furnished by the Developer and written by a corporate body qualified to write surety in the State of Washington, guaranteeing that the Developer will repair any defects found in the work within the time period as further identified herein.
- (g) "Contract Documents": The contract documents shall consist of the following and in case of conflicting provisions, the first mention shall have precedence.

- (1) Developers Agreement
- (2) City Development Guidelines and Public Works Standards

- (3) Other Applicable City Municipal Codes
- (4) City Right-of-Way Use Permit
- (5) Plans
- (6) Standard Details (WSDOT Specifications)
- (7) Specifications - Conditions and Standards of the Contract (As Approved by City)
- (8) City Approved Addenda
- (9) City Approved Change Orders

These documents shall form the Contract.

- (h) "Work": The labor or materials or both, superintendence, equipment, transportation, and other facilities necessary to complete the Contract.
- (i) "City": City of Ilwaco, Pacific County, Washington, a municipal corporation, existing under and by virtue of the laws of the State of Washington. Actions designated as taken by the City are the acts of the Council acting through the Mayor.
- (j) "Mayor" means mayor of the City of Ilwaco or his/her authorized representative.
- (k) "Contractor" means the Developer's contractor or subcontractor.
- (l) "City Engineer" means the City's Engineer, whether a staff engineer, contacted engineer, or consultant.
- (m) "Public Works Superintendent" means the City's duly appointed Public Works Superintendent, or in his absence, the Mayor.
- (n) "Operations and Maintenance Supervisor" means the City's utilities superintendent, or operations and maintenance supervisor, or Public Works Superintendent.

2. Exclusions

- (a) A one time enlargement of less than 800 square feet of total footprint on any parcel of property, or, a one-time net increase of less than 25% of the total aggregate area of the existing footprint(s) of building(s) on the site, whichever is less.

3. Developer to be Informed: The Developer is expected to be fully informed regarding the nature, quality, and the extent of the work to be done, and, if in doubt, to secure specific instructions from the City.

4. Authority of Mayor: The Mayor or his authorized representative shall have the authority to stop work whenever, in his/her opinion, the same shall be necessary to insure compliance with the plans and specifications, and shall have authority to reject work and materials which do not so conform and to decide questions which may arise in the execution of the work.
5. Authority of the Public Works Superintendent: The Public Works Superintendent or his/her authorized representative shall have the authority to determine the amount, quality, acceptability and fitness of the several kinds of work, material and equipment and to decide all questions relative to the classification of materials and the fulfillment of this Contract, and to reject or condemn all work or material which does not conform to the terms of this Contract. The Public Works Superintendent decision in all matters is the decision of the City, and can only be changed by the City. Moreover, the City has not so delegated, and the Public Works Superintendent or his/her authorized representative(s) does (do) not purport to be a safety expert, is not so engaged in that capacity under this Contract, and has neither the authority nor the responsibility to enforce construction safety laws, rules, regulations or procedures, or to order the stoppage of work for claimed violations thereof but may report flagrant safety violations to proper authorities.

The furnishing by the City of resident project representation and/or inspection shall not be construed by the Contractor or Development that the City is responsible for the identification or enforcement of such laws, rules or regulations.

6. Payment for City Services: The Developer shall be responsible for promptly reimbursing the City for all costs and expenses incurred by the City in the pursuit of project submittal, review, approval, and construction. These costs include, but are not limited to, the utilization of staff and "other" outside consultants as may be necessitated to adequately review and inspect construction of the project(s). All legal, administrative, and engineering fees for project review, meetings, approvals, site visits, construction inspection, etc., shall be subject to prompt reimbursement. The Developer is cautioned that project approval (City acceptance) and occupancy permits will be denied until all bills are paid in full.

CHAPTER 2

PERMITS

2.1 SPECIAL PERMIT PROCESS

No person, firm or corporation shall commence work on the construction, alteration or repair of any facility located either in the public right-of-way or a public easement without any necessary permit or permits first having been obtained from the City.

Any party requesting such permit shall file written application therefore with the City at least twenty-eight (28) days before construction is proposed to start. An application will be deemed complete if the city does not provide a written determination to the applicant that the application is incomplete within twenty-eight (28) days after receiving the application. Such application shall be made on a standard City form provided for that purpose, and shall include:

- (1) The name and address of the applicant (name and address of property owner if different than applicant);
- (2) The name and address of the owner of the property abutting the street where the work is proposed;
- (3) The street location of the proposed work, giving the street address or legal description of the property involved;
- (4) A detailed plan showing the dimensions of the abutting properties and the dimensions and location of all existing and/or proposed facilities and other pertinent features to understand the proposed work;
- (5) The plan shall also show the location of buildings or facilities, including loading platforms and roof overhangs (if significant) being served, or to be served by the new construction.

The City may require, at its discretion, the filing of any other information when in its opinion such information is necessary to properly enforce the provisions of this ordinance.

No permit shall be issued until the proposed work has been approved by the appropriate official. Adjudication of disagreements regarding approvals shall be made by the Public Works Superintendent and his decision shall be final.

No plan shall be approved nor a permit issued where it appears that the proposed work, or any part thereof, conflicts with the provisions of this ordinance or any other ordinance of the City of Ilwaco, nor shall issuance of a permit be construed as a waiver of a Zoning Ordinance or other ordinance requirements concerning the plan.

A fee of an amount as designated by the City shall accompany all applications for permits.

2.2 VARIANCES

A. GENERAL

The City Council shall have the authority to grant a variance from the requirements of these specifications and from the requirements of this ordinance after considering the matter. The Public Works Superintendent shall upon request of the proponent refer the variance request on to the City Council, and the Council shall sit, in judgment of same, at a public hearing duly called in accordance with the procedures specified in its Municipal Code. No application for a variance shall be granted by the council unless the council finds:

- (1) That special conditions and circumstances exist which are peculiar to the land such as size, shape, topography or location, not applicable to other lands in the same neighborhood, and that literal interpretation of the provisions of this ordinance would deprive the property owner of rights commonly enjoyed by other properties similarly situated in the same neighborhood;
- (2) That the special conditions and circumstances do not result from the actions of the applicant, and are not self-imposed hardships;
- (3) That granting the variance requested will not confer a special privilege to the subject property that is denied other lands in the same neighborhood;
- (4) That the granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the neighborhood in which the subject property is situated;
- (5) That the granting of the variance requested will be in harmony with the general purpose and intent of these standards, and any applicable Land Use Ordinance(s); and
- (6) That the purpose of the variance is not merely to permit the subject property to be utilized more profitably by the owner or to economize on the cost of improving the property.

B. CONDITIONS

In granting any variance the City Council may prescribe appropriate conditions and safeguards that will ensure that the purpose and intent of the specifications shall not be violated. Further, the City Council will require the applicant to post a performance bond guaranteeing compliance with such conditions.

C. EFFECTIVE DATE OF VARIANCE

The decision granting or denying a variance shall not become final until the expiration of ten (10) days from the date of entry of such decision in the official records of the City Council.

An aggrieved party may file an appeal of such decision to the Pacific County Superior Court (as applicable) within said ten-day period; if no such appeal is filed, the decision shall thereupon become final.

D. PROCEDURE FOR APPLICATION OF A VARIANCE

Application for a variance shall be filed with the City in writing and shall be accompanied by an appropriate fee as stated in the City's Municipal Code, to pay for the cost of processing the application and the costs of publishing and posting the required public notices. All applications shall be accompanied by a current copy of the Pacific County assessor's record showing the legal owners of all property within five hundred feet (500') of the requested variance area. All applications shall contain a statement as to why the variance is necessary, and why it would meet the criteria of this chapter. The application shall also contain scaled drawings of the variance area, abutting roads, and all property within five hundred feet (500') thereof.

E. PUBLIC NOTICE AND HEARING

Proper notice of a hearing on a variance application before the Council shall be as follows:

- (1) One publication in the official newspaper for the City at least fifteen days prior to the date of hearing;
- (2) Posting of copies of the notice of hearing at least fifteen days prior to the hearing in;
 - (A) Ilwaco City Hall
 - (B) The United States Post Office in the City of Ilwaco, and

- (C) In a conspicuous place on the property which is the subject matter of the application;
- (3) Written notice mailed to the owner or reputed owners of property within three hundred feet (300') of the property which is the subject matter of the application, which ownership is deemed to be that of the last owner of record in the current files of the Pacific County Assessor, said notice to be mailed at least fifteen calendar days prior to the date of the hearing by the City Planner.
- (4) The City Clerk shall be responsible for the mailing and publication of all required notices. The Clerk shall diligently observe the foregoing requirements, but minor inaccuracies in giving such notice shall not invalidate the proceedings.

CHAPTER 3

PUBLIC WORKS CONSIDERATIONS

3.1 BONDING

Developers and contractors performing work within the public right-of-way or publicly owned easement(s) shall be prepared to satisfy the following two bonding requirements. The City will only accept an assignment of funds as bonds. The funds will be held by the City in an interest bearing account.

- A. Furnishing a performance bond that shall be conditioned upon faithful completion of that portion of the work performed pursuant to the permit which will require completion by the City should the permittee or his contractor default. The amount of such bond shall be 150% of the outstanding value of the improvements. The City engineer shall review and provide approval, as may be applicable of the submitted amount.
- B. Furnishing a Maintenance Bond. All work shall be guaranteed by the Contractor for a two-year period from the time of inspection and final approval of the construction by the City. The maintenance bond shall be equal to 15% of the total cost of the improvements.

3.2 HOLD HARMLESS CLAUSE

The Developer shall indemnify and hold harmless the City and the City Engineer, and their agents and employees, from and against all claims damages, losses, and expenses, including attorney's fees, arising out of or resulting from the performance of the work, and shall, after reasonable notice, defend and pay the expense of defending any suit and will pay any judgment, provided that any such claim, damage, loss, or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury or destruction of tangible property (other than the work itself), including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission or by any other action giving rise to strict liability of the Developer, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the City or City Engineer, or any of their agents or employees, by any employee of the Developer, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this article shall not be limited in any way by any limitation on the amount or type of damages, compensation, or

under workman's compensation acts, disability benefit acts, or other employee's benefit acts.

The obligations of the Developer under this article shall not include the sole negligence of the City or the City Engineer.

3.3 DEVELOPER'S PUBLIC LIABILITY & PROPERTY DAMAGE INSURANCE

The Developer shall not commence work until he has furnished evidence (in duplicate copy) of insurance required hereunder, and such insurance has been approved by the City Attorney; nor shall the Developer allow any contractor or subcontractor to commence work on his contract or subcontract until the same insurance requirements have been complied with by such contractor or subcontractor. Approval of the insurance by the City Attorney shall not relieve or decrease the liability of the Developer thereby.

Companies writing the insurance under this article shall be licensed to do business in the State of Washington or be permitted to do business under the Surplus Line Law of the State of Washington.

The Developer shall maintain, during the life of the Contract, Comprehensive General and Automobile Liability Insurance, as detailed herein. The insurance shall include, as Additional Named Insured, the City of Ilwaco. All insurance policies shall be endorsed to provide that the policy shall not be canceled or reduced in coverage until after ten (10) days prior written notice, as evidenced by return receipt of registered letter has been given to the City of Ilwaco.

Comprehensive General Bodily Injury and Property Damage Insurance shall include:

- a. Premises & Operations;
- b. Developer's Protective Liability;
- c. Products Liability, including Completed Operations Coverage;
- d. Contractual Liability; and
- e. Broad Form Property Damage.

Comprehensive Automobile Bodily Injury and Property Damage Insurance shall include:

- a. All owned automobiles;
- a. Non-owned automobiles; and
- b. Hired automobiles.

The insurance coverage's listed above shall protect the Developer from claims for damages for bodily injury, including death resulting therefrom, as well as claims for property damage, which may arise from operations under this contract, whether such operations be by himself or by any subcontractor or by anyone directly employed by either of them, it being understood that it is the Developer's obligation to enforce the requirements of this article as respects any contractor or subcontractor.

Comprehensive General and Automobile Liability Insurance shall provide coverage for both bodily injury and property damage, as follows:

- A. Comprehensive General and Automobile Bodily Injury Liability Insurance on an occurrence basis of not less than One Million dollars (\$1,000,000.00) for bodily injury, sickness or disease, including death resulting therefrom, sustained by each person; and for limits of not less than One Million Dollars (\$1,000,000.00) for each occurrence;
- B. Comprehensive General Property Damage Liability Insurance on an occurrence as is for limits of not less than One Million Dollars (\$1,000,000.00) for damage to or destruction of property, including loss of use thereof, arising from each occurrence, and in an amount of not less than One Million Dollars (\$1,000,000.00) in aggregate;
- C. Comprehensive Automobile Property Damage Liability Insurance on an occurrence basis for limits of not less than One Million Dollars (\$1,000,000.00) for damage to or destruction of property, including loss of use thereof, arising from each occurrence;
- D. Comprehensive Liability Insurance shall include the City and the as Additional Named Insured;
- E. Comprehensive General Property Damage Liability Insurance shall include liability coverage for damage to or destruction of property of other, including loss of use of property damaged or destroyed, and all other indirect and consequential damage for which liability exists in connection with such damage to or destruction of property of others, and shall include coverage for:
 - ("X") Injury to or destruction of any property arising out of blasting or explosion;
 - ("C") Injury to or destruction of any property arising out of the collapse of/or structural injury to any building or structure due;

- (1) to excavation, including borrowing, filling or backfilling in connection therewith, or tunneling, pile driving, coffer-dam work or caisson work; or
 - (2) to moving, shoring, underpinning, raising or demolition of any building or structure or removal or rebuilding of any structural support thereof;
- ("U")
- 1. Injury to or destruction of wires, conduits, pipes, mains, sewers or other similar property or any apparatus in connection therewith, below the surface of the ground, if such injury or destruction is caused by and occurs during the use of mechanical equipment for the purpose of excavating or drilling; or
 - 2. Injury to or destruction of property at any time resulting therefrom.

There shall be included in the liability insurance, contractual coverage sufficiently broad to insure the provisions of "Hold Harmless Clause".

Nothing contained in these insurance requirements is to be construed as limiting the extent of the Developer's responsibility for payment of damages resulting from his operations under this Contract.

In the event the Developer is required to make corrections on the premises after the work has been inspected and accepted, he shall obtain, at his own expense, and prior to commencement of any corrective work, full insurance coverage, as specified herein.

The Developer shall furnish, upon request by the City, certified copies of the insurance policy or policies within two weeks of the City's request.

3.4 COMPENSATION & EMPLOYER'S LIABILITY INSURANCE

The Developer shall maintain Workmen's Compensation Insurance or, as may be applicable, Maritime Workmen's Insurance, as required by state or federal statute for all of his employees to be engaged in work on the Project and, in case any such work is sublet, the Developer shall require the contractor or subcontractor similarly to provide Workmen's Compensation Insurance or Maritime Workmen's Insurance for all of the latter's employees to be engaged in such work. The Developer's Labor & Industries account number shall be noted in the Proposal in the space provided.

In the event any class of employees engaged in work at the site of the Project is not covered under the Workmen's Compensation Insurance or Maritime

Workmen's Insurance, as required by state and federal statute, the Developer shall maintain and shall cause each contractor or subcontractor to maintain Employer's Liability Insurance with a private insurance company for limits of at least One Hundred Thousand Dollars (\$100,000.00), each person, and Three Hundred Thousand Dollars (\$300,000.00), each accident, and furnish satisfactory evidence of same.

3.5 NON-INTERFERENCE

The permittee shall be responsible for minimum interference with:

- Traffic Routing
- Fire Facility Clearance
- Adjoining Property
- Utility Facilities
- Natural Surface Drainage

Prior to construction, these items are to be discussed with the City Public Works Department, and/or City Fire and Police Departments and/or the City Building Inspector, and special provisions may be included in any applicable City Permit(s).

3.6 WORK STANDARDS

All work and workmanship performed shall be done in accordance with minimum standards published in the current Standard Specifications for Road, Bridge & Municipal Construction, State of Washington, and current amendments thereto, revised as to form to make reference to Local Governments.

The latest edition of the following additional standards shall be applicable when pertinent, when specifically cited in the standards or when required by state or federal funding authority:

- a. Pacific County Road Standards
- b. Local Agency Guidelines, WSDOT, as amended.
- c. Guidelines for Urban Arterial Program, WSDOT, as amended.
- d. American Water Works Association Standards.
- e. Design criteria of federal agencies including the Federal Housing Administration, Department of Housing and Urban Development, the Federal Highway Administration and Department of Transportation,
- f. A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2001, or current edition when adopted by WSDOT.
- g. Standard Specifications for Highway Bridges, adopted by AASHTO, current edition.

- h. U.W. Department of Transportation Manual on Uniform Traffic Control Devices, "MUTCD", as amended and approved by Washington State Department of Transportation, current edition.
- i. Guide for the Development of Bicycle Facilities, adopted by AASHTO, current edition.
- j. Associated Rockery Contractors (ARC), Standard Rock Wall Construction Guidelines.
- k. American Society for Testing and Materials (ASTM).
- l. Illuminating Engineering Society of America (IES) National Standard Practices for Roadway Lighting, RP-8, Current Edition, as modified herein.
- m. The WSDOT/APWA Standard Plans for Road and Bridge Construction, to be referred to as the "Standard Plans or Standard Details," current edition as amended.
- n. WSDOT Design Manual, current edition as amended.
- o. City and County Design Standards for the Construction of Urban and Rural Arterial and Collector Roads, adopted per RCW 35.78.030 and RCW 43.32.020, May 24, 1989, current edition as amended.
- p. Institute of Transportation Engineers, Traffic Engineering handbook, current edition.
- q. Water System Design Manual, Washington Department of Health, current edition.
- r. Criteria for Sewage Works Design, Washington Department of Ecology, current edition.

3.7 INSPECTION

A. General

The City shall exercise full right of inspection of all excavating, construction, and other invasions of City right-of-way or public easements. The City Public Works Superintendent or designated official shall be notified on the working day prior to commencing any work in the City's right-of-way or public easements. The City Public Works Superintendent and/or his authorized representative is authorized to and may issue immediate stop work orders in the event of noncompliance with this chapter and/or any of the terms and provisions of the permit or permits issued hereunder.

B. Final Inspection

Prior to final approval of construction, a visual inspection of the job site will be made by the City. Restoration of the area shall be complete with all improvements being restored to their original or superior condition. Final approval of construction shall not be given earlier than thirty (30) days after satisfactory completion of construction, as witnessed by the City.

3.8 RECORD DRAWINGS

Permittees or their representatives who install systems within, on, or below the City's public rights-of-way or public easements shall furnish the City with accurate drawings, plans and profiles, showing the location and curvature of all underground structures installed, including existing facilities where encountered and abandoned installations. Horizontal locations of utilities are to be referenced to street centerlines, as marked by survey monuments, and shall be accurate to a tolerance of plus or minus one-half (1/2) foot. The depth of such structure may be referenced to the elevation of the finished street above said utility, with depths to the nearest one-tenth foot being shown at a minimum fifty-foot interval along the location of said utility.

Such record drawings shall be submitted to the City within thirty (30) calendar days after completion of the work. Record drawings shall be stamped, signed and dated by an engineer currently licensed in the State of Washington.

In the event that the permittee or his/her representatives does not have qualified personnel to furnish the record drawings required by this section, he shall advise the City Public Works Superintendent in order that necessary field measurement may be taken during construction for the preparation of record drawings. All costs of such field inspection and measurement, to include the preparation of the record drawings, shall be at the sole expense of the permittee.

Drawing Standards:

Minimum scale - 1" = 50' horizontal; 1" = 5' vertical
Detail scale - Larger as necessary

Record drawings shall be submitted on permanent, stable reproducible mylar with a signature and data, which verifies the "finished" condition of the project. All data as shown on the drawings shall be "fixed line" or ink. Sticky back (glue) reproductions or "sepia" mylars shall not be considered acceptable. Electronic files in the most recent version of "AutoCAD shall be also provided to the City.

The drawings shall be referenced to NGYD 1929 and shall include at a minimum two (2) existing City utility features such as sanitary or storm sewer, manholes, water valves or fire hydrants. Referencing to electrical features such as street lights, telephones or power poles is not acceptable.

3.9 DEVELOPER AGREEMENT REQUIREMENTS

All Contractors, land developers, or others, whether persons or entities, constructing curbs, gutters, storm-drainage systems, streets, water or sewer systems, or additions thereto, to be connected to the storm sewers, sanitary sewer lines and/or water lines of the City of Ilwaco, shall, as a prerequisite to securing approval for the construction of such system, execute a Developer Agreement in the form set forth in the attached documents.

CHAPTER 4

STREET, PATH AND BIKEWAY STANDARDS

4.1 GENERAL CONSIDERATIONS

The overall goal of this chapter is to encourage the uniform development of an integrated, fully accessible public transportation system that will facilitate present and future travel demand with minimal environmental impact to the community as a whole.

- A. Development of properties on or tributary to substandard or unsafe roadways may, depending on the size and type of development, be cause for “off-site” improvements to the substandard or unsafe corridors, to include road drainage facilities. The Public Works Superintendent shall determine when such conditions exist. At a minimum “half street improvements” will be required as a condition of development in and along the entire property as it abuts City rights-of-way. The City shall determine what qualifies as “development”.
- B. This chapter provides minimum street design standards as well as minimum design standards for “stand alone” pedestrian and/or bike trails/paths. Higher design and construction standards may be warranted due to localized design and construction parameters.
- C. Construction and design standards and specifications for streets are contained in the most recent edition of the document entitled “Pacific County Road Standards” and this chapter. All streets must be completed in accordance with these standards.
- D. Curbs, gutters and sidewalks are required in the City’s commercial zones. When required, curbs, gutters, and sidewalks must be constructed according to construction and design standards and specifications for curbs, gutters, and sidewalks contained in the most recent edition of the Pacific County Road Standards.
- E. If a development accesses an existing street or is proposed at the end of an existing street that is not designed to accommodate the expected increase in traffic caused by the new development, then the developer must improve the existing street leading to the development up to the standards required for the expected increase in traffic. Residential developments of up to four units are exempt from this requirement.
- F. In order to conform to minimum standards where developments abut an existing public road or private right-of-way, dedications may be required for extension of the existing public streets or new streets in order to provide continuity with the circulation system.
- G. Easements must be provided for all public facilities and utilities including streets. Additional right-of-way may be required to be dedicated as a condition of development approval.

4.2 PUBLIC STREETS

- A. The term “public street” includes a pre-existing public street as well as a street created by a subdivider that meets the public street standards of this Chapter and is dedicated for public use. The recording of a plat must dedicate the street.

4.3 PRIVATE STREETS

- A. Community street requirements are usually best served by public streets, owned and maintained by the City, private streets may be appropriate in some instances.

- B. Private streets and roads shall be approved only when they are:
1. Permanently established by right-of-way, tract or easement providing legal access to each affected lot, dwelling unit, or business and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable; and
 2. Serving properties and development that is zoned R-3; and homeowner’s association of the legal entity made up of all benefited property owners, under provisions of Section 15.74.145D of this ordinance; and
 3. Designed and built to Pacific County Road Standard. Pavement width of all private street shall be 22 feet or more; radius of horizontal curves and vertical grade of private streets shall be based upon the topography of the site: any vertical grade in excess of fifteen (15) percent shall be approved by the City Engineer; design and construction of private streets shall be subject to the same City engineering inspection and approval as for public streets; modifications to these standards may be granted by the City Engineer if adequate consideration of the following factors is made during the plat review;
 - i. Provision of off-street parking
 - ii. Restriction of on-street parking
 - iii. Provision of adequate clearance for emergency vehicles
 - iv. Provision of clear vision at intersections
 - v. Provision of alternative bicycle and/or pedestrian paths
 - vi. Provision of adequate utility easements outside of street
 - vii. Future street revision or extension is not planned, and
 4. Provision is made for private streets to be open at all times for emergency and public service vehicles; an easement or other right of access shall be recorded which runs in favor of the City of Ilwaco; said right of access shall provide the right of ingress and egress for the City and its employees to carry out any lawful City purpose, including but not limited to fire, police, water, and sewer services; said easements shall also provide access

to all other urban service providers such as refuse haulers, television cable operators, electric utility providers, emergency medical services and others; and

5. Private streets shall not obstruct public street circulation; and

6. At least one of the following conditions exist:

- i. Existing abutting development precludes the construction of a public street, or
- ii. Topographic, geological and soil conditions make development of a public street undesirable, or
- iii. The streets are within a private community with a corporate or a functional identity, or
- iv. Neighborhood traffic circulation and lot access can be met more logically by private streets than by public streets, or
- v. Streets are a part of a planned unit development (PUD), or
- vi. Streets serve commercial facilities where no circulation continuity is necessary, or
- vii. The City Engineer and Fire Department determine that no other access is available and the private street is adequate.

C. Notice. The following statement is required on the face of any plat, short plat, site plan, or binding site plan containing a private street:

“City of Ilwaco has no responsibility to improve or maintain private streets contained within or private streets providing access to the property described in this plat. Any private street shall remain a private street unless it is upgraded to public street standards including standards meeting ADA (Americans with Disabilities Act) requirements at the expense of the subdivider or adjoining lot owners to include hard surface paving and is accepted by the City for public ownership and maintenance.”

D. Maintenance agreement. The City will not maintain roadways, signs or drainage improvements on private streets. A private maintenance covenant recorded with the County Auditor will be required for any private street. The covenant will set out the terms and conditions of responsibility for maintenance, maintenance methods, standards, distribution of expenses, remedies, for non-compliance with the terms of the agreement, right of use easements, and other considerations. The covenant shall be submitted to the City Engineer or his designee for approval prior to recording.

All private streets shall be maintained by the owners of the property served by them and kept in good repair at all times. In order to insure the continued good repair, a declaration of covenant and requiring maintenance of the private street shall be recorded with the Pacific County Auditor's office concurrent with recording of the subdivision plat.

The covenants shall include the following terms:

1. The Covenant shall establish minimum annual assessments in amount adequate to defray costs of ordinary maintenance and procedures for approval of additional needed assessments.
 2. The Covenant shall include a periodic maintenance schedule.
 3. The covenants for maintenance shall be enforceable by any property owner served by the street.
 4. The means shall be established for assessing maintenance and repair costs equitably to property owners served by the private street.
 5. The covenants shall run with the land.
 6. "Maintenance" shall include, but not be limited to street surfacing, shoulders, gates, signs, pavement markings, street lighting, storm drainage facilities and vegetation control.
 7. The City shall have the right to inspect the condition of Private Street and if in the opinion of a licensed professional engineer, the condition of private streets have deteriorated to the level where improvements are needed, the City has the right to order that this work be done. If the property owners associated or the developer do not carry out said improvements in a timely manner, the City has the right to order the improvements.
- E. Street signs. Private street signs with street designations shall be provided by the developer at the intersection of Private Street with private and public streets. Such signs shall meet the specifications of Pacific county Road Standards and, in the case of intersections with public streets, shall be located within the public right-of-way or within a separate maintenance easement. Road signs shall be included in the maintenance agreement.
- F. Inspection. Private streets will be subject to the same inspection schedule as public streets.
- G. Developer maintenance obligation. The developer of a residential plat shall be responsible to insure the maintenance of the private street for a period of two (2) years from the date of recording of the plat or short plat. Thereafter, the developer's maintenance responsibility will depend upon the number of lots under the developer's continuing ownership, as stated in the recorded maintenance agreement.

4.4 STREETS

- A. All street design and construction must provide for the maximum traffic loading and capacity conditions anticipated based upon existing land use and zoning. The width and grade of the pavement must conform to specific standards set forth herein for safety and uniformity.
- B. The design of streets and roads shall depend upon their type and usage. If a street is dedicated to public use, the street must be classified as provided in Table 4-1. Classification will be based on the following considerations:

1. The projected volume of traffic to be carried by the street, stated in terms of the number of trips per day;
2. The number of dwelling units to be served by the street may be used as an indicator of the number of trips but is not conclusive;
3. Whenever a subdivision street continues an existing street that used to end outside the subdivision, the classification of the street will be based upon the street in its entirety, both within and outside of the subdivision.
4. The classification of streets must comply with the most current edition of the Pacific county Roads Standards. Table 4-1 includes road or right-of-way classifications based on the anticipated Average Daily Traffic (ADT) in ten years.

**Table 4-1
Street Classification
(Pacific County Road Standards)**

Average Daily Trips (ADT)	Street Classification
2000+	Major Collector
400 - 2000	Minor Collector
0 - 400	Access Collector
NA	Private Road

- C. Except where these standards provide otherwise, design detail, construction workmanship, and materials shall be in accordance with the current edition of the Washington State Department of Transportation (WSDOT) and American Public Works Association (APWA) Standard Specifications for Road, Bridge, and Municipal Construction and the WSDOT/APWA Standards for Road and Bridge Construction.
- D. All subdivisions and site plans must provide direct access to at least one existing improved and publicly-dedicated street.
- E. The layout of streets shall provide for the continuation of existing arterial streets in adjoining subdivisions or of their proper projection when adjoining property is not subdivided. Local access streets, which serve primarily to provide access to abutting property, shall be designed to discourage through traffic.
- F. The maximum length of residential blocks should be six hundred (600) feet, and minimum length should be three hundred (300 feet), unless existing conditions make this requirement impractical in the judgment of the City Council.
- G. Streets must be laid out so that the lengths, widths, and shapes of blocks adequately address the following:
 1. Provision of adequate building sites suitable to the type of use contemplated;
 2. The zoning requirements are able to be met on future building permits;
 3. The limitations and opportunities of the topography;

4. The needs for convenient access, circulation, control and safety of vehicular and pedestrian traffic are considered.
- H. Lots to be created must comply with the following requirements:
1. Every lot must have access to allow emergency vehicles to enter and exit, as well as, for all those likely to need to desire access to the property in its intended use;
 2. Lot lines must be at right angles to street lines or radial to curvilinear streets, unless a variation will result in a better street or lot plan in the opinion of the decision-making body;
 3. Dimensions of corner lots must be large enough to allow for front yard setbacks off both streets; and
 4. Corner lots must be graded to provide sufficient sight clearance at intersections.
 5. If a driveway connects to a City street, the property owner shall maintain the driveway to where it connects with the City street pavement. All driveways to be constructed connecting to the City street must obtain a permit, must be designed and constructed to City standards. All driveway construction connecting to the City street will be inspected by City staff.
- I. Proposed streets should extend to the boundary lines of the proposed subdivision in order to provide for the future development of adjacent tracts, unless prevented by natural or man-made conditions, or unless an extension is determined to be unnecessary or undesirable by the City. The resulting dead-end street shall be provided with a temporary cul-de-sac. The temporary cul-de-sac shall be appropriately signed as “temporary” and further paved, to include furnishing and installing concrete curbs, gutters and sidewalks and constructed to City standards. Temporary dead-end streets in excess of six hundred (600) feet will not be allowed unless no other practicable alternative is available.
- J. The street system (in residential subdivisions and short subdivisions) shall be laid out with a minimum number of intersections with other arterial streets. Arterials shall not intersect with other arterials at intervals closer than one thousand three hundred twenty feet and no streets shall intersect at intervals closer than one hundred twenty five feet, unless, in the judgment of the Public Works Superintendent, an exception to this rule would be in the public interest and welfare.
- K. Streets shall be laid out so as to intersect as nearly as possible at right angles, and in any event, no street shall intersect with any other street at an angle of less than sixty degrees, without specific written City approval.

- L. Access roadways or driveways must be located to provide the following minimum sight distances:

<u>Existing Speed Limit</u>	<u>Sight Distance</u>
50*	450'
40	320'
30	200'

*This value shall be used for major and minor collectors regardless of existing speed limit unless prior approval is obtained from the City Engineer.

- M. Maintenance of approach roads/driveways shall be the responsibility of the owner whose property they serve.
- N. No approach road/driveway shall be constructed in such a manner that restricts existing drainage or constitutes a hazard to a street lighting standard, utility pole, traffic control device, fire hydrant or other public facility. Relocation shall be arranged through the appropriate agency and the cost shall be borne by the developer.
- O. Whenever possible, proposed intersections along one side of a street must coincide with existing or proposed intersections on the opposite side of such street. In any event, where a centerline offset (jog) must occur at an intersection, the distance between centerlines of the intersecting streets must be evaluated and designed according to accepted traffic safety standards.
- Q. Street profile grade should conform closely to the natural contour of the land. Streets must be designed to facilitate drainage and stormwater runoff, and street grades must conform as closely as practicable to the original topography.
- R. The maximum grade at any point on a street must not exceed fifteen percent (15%) unless no other practicable alternative is available. However, in no case may streets be constructed with grades that create a substantial danger to the public safety in the professional opinion of the City Engineer.
- T. The developer is required to retain a licensed geotechnical engineer to make soils tests and to provide engineering recommendations for design of the sub-base and roadway sections based on “in place” soils, depth of “free draining” structural materials, projected pavement loadings, roadway classification, average daily traffic volume, etc.
- U. In special circumstances, as may be specifically approved or required by the City Council, due to local conditions and/or geometric restrictions, paving widths or improvement standards may be required which are different than those specifically listed herein.
- V. The location and alignment of streets shall generally conform to existing streets and to the City’s official street naming policy or ordinance except where, in the opinion of the Public Works Superintendent, topography or some physical features eliminate the possibility of connecting these streets in the future. The County’s E-911 Coordinator and the City Council shall approve all street names.
- X. The design of any proposed street that intersects with a state highway shall be submitted to WSDOT for approval. Improvements to the state highway are to be the sole responsibility of the developer.

- Y. Street jogs with centerline offsets less than one hundred twenty-five feet are prohibited.
- Z. In some existing plats in the City a street is being used as a driveway because all of the lots created at the time that the area was platted have not yet been built. In these situations the property owner using the street as a driveway must improve it to City street standards and then dedicate the street to the City.
- AA. Intersecting streets shall be laid out so that blocks between street lines are not more than one thousand three hundred twenty feet in length, except where in the opinion of the Public Works Superintendent extraordinary conditions justify a departure from the maximum.
- BB. Streets shall conform to all requirements of the latest edition of the Uniform Fire Code adopted by the City.
- CC. All street construction plans shall be submitted to the City and shall include the following required information:
1. Plan and profile;
 2. Street name;
 3. Centerline bearings;
 4. Centerline/baseline stationing;
 5. Centerline elevations every fifty feet;
 6. Gutterline elevations every fifty feet if not standard crown;
 7. Slope shall be in percent;
 8. Transverse slope: Two percent standard crown (to be used unless approved/required by City);
 9. Longitudinal slope - see design standard table;
 10. Horizontal and vertical curves shall be required when a change of centerline grade occurs greater than one percent:
 - a. Fifty feet minimum length;
 - b. Elevations required at twenty five feet stations and at the P.C., P.I., P.T. and low point or high point;
 11. Longitudinal gutterline slope - see design standard table;
 12. Pavement cross sections per City standard detail;
 13. Accurate locations of monuments at all centerline intersections, cul-de-sacs, P.C.'s, P.T.'s, and P.R.C's;
 14. Length and width of sidewalks and driveways;
 15. The location of all existing fire hydrant within 300 feet of the project shall be indicated;
 16. Curb and gutter;
 17. Wheelchair ramps;
 18. Illumination. (Illumination not required to be shown on same street as on plan/profile, but approval at location of miscellaneous utilities (i.e., gas,

- power, CATV, cable) as required. Plan shall be submitted to City Engineer for approval prior to installation.)
 - a. Luminaries - location, material, height and wattage.
 - b. Service cabinet - location and material.
 - c. Conduits and wire - location, material size and depth.
 - d. Junction boxes - location and material;
- 19. Channelization and Signing:
 - a. Lane markers - location and type.
 - b. Pavement markings - location and type.
 - c. Signs - location and type.
- 20. Grades (slopes).
 - a. Arterials, eight percent maximum.
 - b. Allow an average maximum grade on all other streets as follows: eight percent maximum with the following exceptions: A grade of up to twelve over a distance not to exceed three hundred feet and a maximum grade of fifteen percent for a distance not to exceed seventy-five feet.
 - c. Grades of pedestrian ways or crosswalks shall not be more than eight percent (unless otherwise approved in writing by the Public Works Superintendent).
- DD. All vertically aligned profile grade changes shall be connected with a vertical curve which shall have a minimum sight distance of one thousand feet on arterials, five hundred feet on collector streets and three hundred feet on all other streets.
- EE. At street intersections, property line corners shall be rounded by an arc, the minimum radii of which shall be fifteen feet for alleys, twenty-five feet for local access streets and 30 feet for all other street classifications. In business districts, a chord may be substituted for such arc if specifically approved by the Public Works Superintendent.
- FF. Street intersections with centerline offsets of less than three hundred feet shall not be allowed.
- GG. All topsoil, organic, and structurally unsuitable soils shall be removed from beneath the proposed street section as located between the outside edges of sidewalks.
- HH. All new utility systems such as power, cable TV and telephone shall be buried, except where topography or site conditions prohibit reasonable installation. Design and installation of the system shall be done by the franchised utility company. Design shall be submitted to the Public Works Superintendent for review and approval prior to installation.

- II. Street lighting shall be provided in accordance with Pacific County PUD standards.
- JJ. Any project of sixteen dwelling units or more, accessing off of an arterial road requires a center turn lane and right hand turn lanes.
- KK. Roads are to be saw cut before permanent patch is made or new AC pavement is installed abutting the existing road.
- LL. The General Notes numbered 1 through 6, as shown and further referenced herein, shall be included or referenced on any plans submitted to the City for construction approval dealing with street design.

4.5 GENERAL NOTES (STREET CONSTRUCTION)

- 1. All workmanship and materials shall be in accordance with current Developer Standards and current amendments hereto, and current WSDOT/APWA Standard Specifications for Road, Bridge, and Municipal Construction and any current amendments thereto, amended as per City Standards.
- 2. The contractor shall be responsible for all traffic control in accordance with the MUTCD manual. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for possible approval. No work shall commence until all approved traffic control is in place. Work shall cease when traffic control fails to meet minimum requirements.
- 3. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment shall be staked by engineering or surveying firm capable of performing such work. Such firms shall be currently licensed in the State of Washington to perform such work.
- 4. Where new asphalt joins existing, the existing asphalt shall be cut to a neat vertical edge and tacked with Asphalt Emulsion type CSS-1 in accordance with the standard specifications. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed with grade AR-4000W paving asphalt. A sand blanket shall be applied to the surface to minimize "tracking" of same.
- 5. Compaction of subgrade, rock, and asphalt shall be in accordance with the WSDOT Standard Specifications.
- 6. Form and subgrade inspection by the City is required before pouring concrete. A minimum forty-eight hours' notice is required to be provided to the Public Works Superintendent for form inspection.

See Section 4.19 for testing and sampling frequencies.

4.6 DESIGN STANDARDS

- A. Pavement and right-of-way width depends upon the street classification. The table of Minimum Street Design Standards, Table 4-2, show the minimum widths allowed. Street widths shall be measured from face of vertical curb to face of

vertical curb on streets with cement concrete curb and gutter, and from edge of pavement to edge of pavement on streets “approved” by the City without concrete vertical curb and gutter.

Table 4-2
Minimum Roadway Dimension

Classification	Average Daily Trips	Right-of-Way Width (feet)	Street Width (feet)	Lane Width (feet)	Shoulder Width ¹ (feet)
Collector - Access	0-400	60	22	11	3
Collector - Minor	400-2000	60	22	11	6
Collector - Major	2,000 +	60	24	12	8
Private Road	NA	Note 2	12	NA	2

1- Minimum shoulder width if curb and gutter are not provided.

2- Right-of-way as required to construct and maintain roadway facility, plus provisions for any utilities unless utilities provided for by separate easement outside roadway easement, but not less than forty (40) feet.

4.7 STREET NAMES

- A. The developer must secure the approval of the City Council regarding the naming of streets; such approval shall not be unreasonably withheld. This should be done at the time the preliminary plat is submitted and again upon approval of the final plat. A private road will be designated “Lane”. The Public Works Superintendent will insure that the name assigned to a new street is consistent with policies of the City and the County Emergency Management Director.
- B. An address number will be assigned to all new buildings at the time the building permit is issued. It is then the owner’s responsibility to see that the house numbers are placed clearly and visibly at the main entrance to the property or at the principal place of ingress.

4.8 SIGNING

- A. The developer is responsible for furnishing and providing all temporary and permanent traffic control signs. Traffic control signing shall comply with the provisions as established by the U.S. Department of Transportation Manual on Uniform Traffic Control devices (MUTCD). Street designation signs, including poles and hardware, shall be furnished and installed by the developer. Street designation signs shall display street names or grid numbers as applicable.

4.9 RIGHT-OF-WAY

- A. Right-of-way is determined by the functional classification of street. Arterials, collectors, and local access streets shall have a right-of-way width of not less than 60 feet. Private roads shall have a right-of-way not less than 40 feet. Private road right-of-way may need to be greater than 40 feet to accommodate utility easements. See Minimum Roadway Dimensions (Table 4-2) for specific additional information.
- B. Additional roadside easements will be required to facilitate future roadway widening at the discretion of the City or as a condition of development approval. In order to conform to minimum standards where developments abut an existing public road or private right-of-way, dedications may be required for extension of existing public roads or new roads to provide continuity with the circulation system.
- C. Right-of-way requirements may be increased if additional lanes, pockets, transit lanes, bus loading zones, operational speed, bike lanes, utilities, schools or other factors are proposed and/or required by the City.
- D. Right-of-way shall be conveyed to the City on a recorded plat or by a right-of-way dedication deed. All costs of same to be borne by the property owner/developer.

4.10 STREET FRONTAGE IMPROVEMENTS

- A. All industrial, commercial, or residential development or redevelopment shall install street frontage improvements at the time of construction. Such improvements shall generally include concrete curb and gutter, concrete sidewalk, street storm drainage, street lighting system, utility relocation, landscaping and irrigation, undergrounding aerial utilities and street pavement widening all per these Standards. Plans shall be prepared and signed by a registered engineer currently licensed in the State of Washington.
- B. All frontage improvements shall be made across the full frontage of the property.
- C. All frontage improvements shall provide for a smooth transition to neighboring property.
- D. Exceptions:
 - 1. When the proponent requests that the City Council evaluate if the required frontage improvements cannot be reasonably performed due to unique conditions, the city council will consider a request from the proponent that an "equal" and voluntary monetary amount be deposited with the City and

retained by the City for such use per applicable State law. The equivalent cost shall be approved by the city and include design, administration, and construction costs.

2. When improvements cannot be reasonably accomplished in a timely manner a recorded agreement (performance bond or equal) on forms provided by the City shall be completed which provide for these improvements to be installed at a later date by the proponent.

4.11 CUL-DE-SAC

- A. A cul-de-sac is required on all dead end access road serving two (2) or more parcels, or an approved turn around for driveway access roads in excess of three hundred (300') feet.
 1. Minimum right-of-way diameter is ninety (90') feet for cul-de-sacs.
 2. Minimum pavement width for cul-de-sacs is seventy (70') feet in diameter.
 3. There shall be no islands in the center of any cul-de-sac without specific approval of the City.
- B. Proposed streets should extend to the boundary lines of the proposed subdivision in order to provide for the future development of adjacent tracts, unless prevented by natural or man-made conditions, or unless an extension is determined to be unnecessary or undesirable by the City. The resulting dead-end street shall be provided with a temporary cul-de-sac. The temporary cul-de-sac shall be appropriately signed as "temporary" and further paved, to include furnishing and installing concrete curbs, gutters and sidewalks and constructed to City standards. Temporary dead-end streets in excess of six hundred (600) feet will not be allowed unless no other practicable alternative is available.
- C. There shall be no islands in the center of any cul-de-sac without specific approval of the City.

4.12 TEMPORARY DEAD ENDS

Where a street is temporarily dead ended, turn around provisions must be provided where the road serves more than one lot. A turn around may be a hammerhead as shown in the Miscellaneous Detail Section of these Standards only if pre-approved by the local fire marshal and the City Council.

4.13 INTERSECTIONS

- A. Traffic control will be as specified in the Manual on Uniform Traffic Control Devices (MUTCD) or as may be specifically modified by the Public Works Superintendent as a result of appropriate traffic engineering studies.

- B. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. Sharp angled intersections shall be avoided. No two streets may intersect at less than sixty (60) degrees.
- C. Not more than two streets may intersect at any one point.
- D. Whenever possible, proposed intersections along one side of a street must coincide with existing or proposed intersections on the opposite side of such street. In any event, where a centerline offset (jog) must occur at an intersection, the distance between centerlines of the intersecting streets must be evaluated and designed according to accepted traffic safety standards.
- E. Spacing between adjacent intersecting streets, whether crossing or “T” should be as follows:

When highest classification involved is:	Minimum centerline offset should be:
Major Arterial	350 feet
Minor Arterial	300 feet
Collector Street	300 feet
Local Access Street	150 feet

- F. When different class streets intersect, the higher standard shall apply on curb radii. Deviations to this may be allowed at the discretion of the Public Works Superintendent.
- G. On sloping approaches at an intersection, landings shall be provided with grade not to exceed one foot difference in elevation for a distance of 30 feet approaching any arterial or collector or 20 feet approaching a local access street, measured from nearest right-of-way line (extended) of intersecting street.

4.14 DRIVEWAYS

- A. Driveway details are located in the Pacific County Road Standards
- B. Residential driveways are those serving less than five (5) single family dwelling units. All others shall be considered commercial.
- C. Residential driveways minimum width is fourteen (14’). Commercial driveways minimum width is twenty-eight (28’) feet.
- D. An access plan shall be submitted for all proposed development for review by the City Engineer. The following guidelines shall be followed for developments using a city road for access from individual lots.

- E. Design Standard:
- Major Collectors.** Internal collection of traffic will be achieved whenever possible. The number of access points shall be a function of traffic volume on the major collector, but generally then shall not exceed one (1) access point per nine hundred (900') feet of frontage.
- Minor Collectors.** The same general guidelines apply as major collectors. The maximum number of access points shall be one (1) access point per seven hundred (700') feet.
- Local Access.** Internal collection of traffic desirable. Individual driveways will be allowed for roads with 150 ADT or less including projected traffic from development. For roadways with 150 to 400 ADT, individual driveways may be allowed. Roadways with 400 to 10000 ADT will meet the provisions of minor collectors. Roadways with greater than 1,000 ADT will meet the provisions of major collectors.
- F. Access roadways or driveways will be located to provide the following minimum sight distance:
- | | |
|-------------------------------|----------|
| Major and Minor Collectors | 450 feet |
| Local Access (40 mph) | 320 feet |
| Local Access (30 mph or less) | 200 feet |
- G. Driveways and accesses will approach the City street at ninety degrees (90°) or as close as possible. In no case will an approach angle of sixty degrees (60°) or less be permitted.
- H. All abandoned driveway areas on the same frontage shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored, at the Property Owner's expense.
- I. All driveway approaches shall be constructed of Portland Concrete Cement, and shall be at least 6-inches thick, over a 4-inch crushed surfacing (5/8" minus) top course. Driveways shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk construction.]
- J. Driveways may be constructed of cast in place or precast concrete paving blocks to reduce impervious area as approved by the Public Works Superintendent.
- K. Grade breaks, including the tie to the roadway, shall be constructed as smooth vertical curves. The maximum change in driveway grade shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve. The grades of all driveway approaches are to be approved by the City.
- L. No commercial or industrial type driveway shall be constructed, if reasonably possible, where backing onto the sidewalk or street is required.
- M. No driveway aprons shall extend into the street further than the face of the curb.

- N. Generally, the two edges of each driveway shall be parallel.
- O. Every driveway must provide access to a garage, carport, parking area or other structure on private or public property requiring the entrance of vehicles. No public curb shall be cut unless a driveway is installed.
- P. Maintenance of driveway approaches shall be the responsibility of the owners whose property they serve.
- Q. A driveway permit shall be required. No person shall begin work on the construction, alteration, repair or removal of any driveway or the paving of any parking strip on and/or adjacent to any street, alley or other public place in the City without first obtaining a permit from the City. Exceptions to permit acquisition requirements may be granted at the discretion of the Public Works Superintendent and/or Building Official.
- R. No driveway shall be located as to create a hazard to pedestrians, bicyclists or motorists or to invite or compel illegal or unsafe traffic movements.
- S. No driveway shall be constructed in such a manner as to be a hazard to any existing street lighting standard, utility pole, and traffic regulating device or fire hydrant. The cost of relocating any such street structure when necessary to do so shall be paid by the abutting property owner. The relocation of any street structure shall be allowed with the specific written approval of the Owner of the structure involved.
- T. Except as otherwise provided, the width of any residential driveway shall not exceed twenty-four feet (exclusive of the radii of the returns). The maximum width for any commercial driveway shall be sixty feet. The Public Works Superintendent may authorize additional residential driveway widths for three-car garages or for access driveways necessary for off-street parking or recreational vehicles.
- U. The total width of all driveways for any one ownership on a street shall not exceed thirty percent of that ownership along the street. Any driveway which has become abandoned or unused through a change of the conditions for which it was originally intended or which for any other reason has become unnecessary, shall be closed and the owner shall replace any such driveway curb-cut with a standard curb according to the City's standards.
- V. The length of any driveway shall not exceed one hundred fifty feet, without approval of the Public Works Superintendent.

- W. There shall not be more than two driveways on one street for any one ownership except where a single ownership is developed into more than one unit of operation, each unit sufficient in itself to meet the requirements of off-street parking and loading as required by the zoning ordinance and where the necessity for separate access to the street is evident. In such cases, there shall not be more than two driveways on the street for any one unit of operation.
- X. Driveway slopes or grades shall not exceed eight percent unless otherwise authorized/approved by the Public Works Superintendent in writing. The Public Works Superintendent will consider authorizing driveway slopes exceeding eight percent, up to a maximum of twelve percent, if it is determined that:
1. The driveway is the only economically and environmentally reasonable alternative.
 2. The driveway will not present a traffic, pedestrian, bicycle or safety hazard.
 3. The police and fire chief concur in allowing the increased driveway slope.
 4. The public health, safety and general welfare will not be adversely affected.
- Y. No driveway may access any street within 75 feet (measured along the street) of any other street access on either side.
- Z. No driveway access shall be allowed onto an arterial street within 150 feet of the nearest right-of-way line of an intersecting street. No driveway shall be located within 20 feet of a crosswalk.
- AA. Within the limitations set forth above, access to arterial streets within the City shall be limited to one driveway for each tract of property separately owned, except that automobile service stations may be allowed two driveways as further stated herein.
- BB. Driveways giving direct access onto arterials may be denied if alternate access is available. Deviations of these standards may be permitted by the Public Works Superintendent.
- CC. Parking lot circulation and signing needs shall be met on site. The public right-of-way shall not be utilized as part of a parking lot flow.
- DD. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the Public Works Superintendent.

4.14 SURFACING REQUIREMENTS

- A. All streets in the City of Ilwaco will be paved with either Asphalt Concrete or Cement Concrete, in strict compliance with these standards.
- B. The pavement design shall meet the requirements in the latest publication of the AASHTO Guide for Design of Pavement Structures. The pavement section shall be designed and stamped by an engineer currently licensed in the State of Washington.
- C. One soil sample per each 500 LF of centerline with 3 minimum per project representative of the roadway subgrade shall be taken by the Developer and delivered to a City approved soils lab in order to determine a statistical representation of the existing soil conditions.
- D. Soil tests shall be performed by an engineering firm specializing in soils analysis and currently licensed in the State of Washington.
- E. The soils report, signed and stamped by a soils engineer licensed by the State of Washington, shall be based on actual soils tests and submitted with the plans. All depths indicated are a minimum compacted depth.
- F. Construction of streets paved with Asphalt Concrete shall conform to Section 5-04 of the Washington State DOT Standard Specifications. Pavement material will be HMA Cl. ½" PG 58-22 asphalt concrete and be constructed at least two (2) inches thick (minimum compacted thickness) over the prepared crushed surface, top course, or asphalt treated base. Mechanical spreading and finishing will be as described in Section 5-04.3(9) of the Standard Specifications. Compaction will be performed by the equipment and methods presented in Section 5-04.3(10) of the Standard Specifications, and Surface Smoothness shall satisfy the requirement of Section 5-04.3(13) of the Standard Specifications.
- G. Cement concrete streets will be constructed as specified in Section 5-05 of the Standard Specifications.
- H. Permanent pavement patching will be performed as described in the pavement repair detail listed herein, and in compliance with Section 5-04 of the Standard Specifications. All fill material will be placed in lifts no thicker than six inches and mechanically compacted to 95 percent of standard density, as described in Section 2-03 of the Standard Specifications and to the satisfaction of the Public Works Superintendent.

4.15 TEMPORARY STREET PATCHING

- A. Temporary restoration of trenches shall be accomplished by using 2" HMA Cl. ½" PG 58-22 Asphalt Concrete Pavement when available or 4" medium-curing (MC-250) liquid asphalt (cold mix), 3" Asphalt Treated Base (ATB), or steel plates suitable for H-20 traffic loading conditions. Steel plates shall be provided with a cold mix "lip" to accommodate a smooth transition from pavement to steel plate.
- B. ATB used for temporary restoration may be dumped directly into the trench, bladed and rolled. After rolling, the trench must be filled flush with asphalt concrete pavement to provide a smooth riding surface.
- C. All temporary patches shall be maintained by the contractor until such time as the permanent pavement patch is in place. All temporary patch materials shall be loaded and hauled to waste by the Developer, in compliance with applicable governmental regulations.
- D. If the contractor is unable to maintain a patch for whatever reason, the City will patch it at actual cost plus overhead and materials. The property owner/developer/permittee shall be invoiced for any City expenses incurred to comply with this Contractor requirement.

4.16 TRENCH BACKFILL AND RESTORATION

- A. All trench and pavement cuts shall be made by saw cuts or roller cut if approved by the Public Works Superintendent. The cuts shall be a minimum of 1 foot outside the trench width.
- B. All trenching shall be backfilled with gravel base, Class B, or crushed surfacing materials conforming to Section 4 of the WSDOT Standard Specifications. The trench shall be compacted to 95 percent maximum density, as described in Section 2-03 of the WSDOT Standard Specifications. The City will be the sole judge of approving materials to be utilized for backfill. Typically, crushed rock (5/8-inch minus) or control density fill (CDF) shall be placed and compacted in the trench sections for all right angle (±) street crossings.
- C. If the existing material is determined by the City to be suitable for backfill, the contractor may use the native material except that the top 12 inches of the trench section shall be 5/8-inch minus crushed rock or other structurally suitable material as approved by the City Inspector or Engineer. Exceptions may be granted by the City based on site evaluation of excavated materials. All trench backfill materials shall be compacted to 95% density.

- D. Backfill compaction shall be performed in 6 inch lifts, unless otherwise approved by the City.
- E. Replacement of the asphalt concrete or Portland concrete cement shall match existing asphalt concrete or Portland concrete cement depth, except asphalt shall be a minimum compacted thickness of 2 inches and concrete cement shall be a minimum compacted thickness of 6 inches.
- F. Tack shall be applied to the existing pavement and edge of cut and shall be emulsified asphalt grade CSS-1 as specified in Section 9-02.1(6) of the WSDOT Standard Specifications. Tack coat shall be applied as specified in Section 5-04 of the WSDOT Standard Specifications.
- G. Asphalt concrete HMA CL. ½" PG 58-22 shall be placed on the prepared surface by an approved paving machine and shall be in accordance with the applicable requirements of Section 5-04 of the WSDOT Standard Specifications, except that longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of 12 inches unless otherwise approved by the City. Fine and coarse aggregate for asphalt concrete shall be in accordance with Section 9-03.8 of the WSDOT Standard Specifications. Asphalt concrete over 2 inches thick shall be placed and compacted in equal lifts not to exceed 2 inches each.
- H. All street surfaces, walks or driveways within the street trenching areas affected by the trenching shall be feathered and shimmed to an extent that provides a smooth-riding connection and expeditious drainage flow for the newly paved surface. Shimming and feathering as required by the City Inspector shall be accomplished by raking out the oversized aggregates from the Class B mix as appropriate.
- I. Surface smoothness shall be per Section 5-04.3(13) of the WSDOT Standard Specifications. The paving shall be corrected by removal and repaving of the trench only.
- J. All joints shall be sealed using paving asphalt AR4000W.
- K. When trenching within the roadway shoulder(s), the shoulder shall be restored to its original or better condition.
- L. The final patch shall be completed as soon as possible and shall be completed within 30 days after first opening the trench. This time frame may be adjusted if delays are caused by inclement paving weather, or other adverse conditions that may exist. However, delaying of final repair is allowable only subject to the Public Works Superintendent's approval. The Public Works Superintendent may deem it necessary to complete the work within the 30 days' time frame and not

allow any time extension. If this occurs, the Contractor shall perform the necessary work as required by the City.

4.17 SURVEY STAKING

- A. All surveying and staking shall be performed by an engineering or surveying firm employed by the Developer and capable of performing such work. The engineer or surveyor performing and directing such work shall be currently licensed by the State of Washington to perform said task.
- B. A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
- C. The minimum staking of streets shall be as follows:
 - 1. Stake centerline alignment every 25 feet (50 feet in tangent sections) with cuts and/or fills to subgrade.
 - 2. Stake top of ballast and top of crushed surfacing at centerline and edge of pavement every 25 feet.
 - 3. Stake top back of curb at a consistent offset for vertical and horizontal alignment.

4.18 MATERIAL AND CONSTRUCTION TESTING

- A. Testing shall be required at the developer's or contractor's expense. The testing shall be ordered by the developer or contractor and the chosen testing lab shall be preapproved by the City. Testing shall be done on all materials and construction as specified in the WSDOT Standard Specifications and with frequency as specified herein.
- B. In addition, the City shall be notified before each phase that street construction commences (i.e., staking, grading, subgrade, ballast, base, top course, and surfacing).

4.19 SIDEWALKS, CURBS AND GUTTERS

- A. Curbs, gutters, and sidewalks are required in the City's commercial zones. When required, curbs, gutters, and sidewalks must be constructed in accordance with these design standards and the latest ADA and WSDOT/APWA Standard Specifications.
- B. Plans for the construction of sidewalks, curbs and gutters will be submitted as part of the street plans when applicable.

- C. Sidewalks shall be constructed of Portland Cement Concrete, 4 inches thick (6-inch thick at driveway sections) per Section 8-14 of WSDOT Standard Specifications. When the sidewalk, curb and gutter are contiguous, the width of the sidewalk shall be measured from back of curb to back of sidewalk.
- D. Sidewalks will be constructed on a compacted gravel base (Class B) or 5/8-inch minus crushed rock of suitable thickness to provide a firm and unyielding base. Sidewalks will be constructed of Portland Cement Concrete as described in Section 8-14 of the WSDOT Standard Specifications and be designed and constructed in compliance with those details as shown herein. Typically, in commercially zoned areas the sidewalks shall abut the curb. The City Council may vary sidewalk dimensional characteristics and location to meet localized or existing conditions.
- E. Sidewalks shall be at least 4" thick. Those sections of a sidewalk which serve as a driveway shall be at least 6" thick. :
- F. The sidewalks will be divided into five foot lengths by contraction joints and expansion joints will be at intervals of no more than 15 feet. Joints shall be filled with an asphalt mastic material.
- G. Sidewalk width may vary from a minimum of 5 feet to 10 feet in width at the discretion of the City Council in commercial corridors or match existing widths if greater than 10 feet wide.
- K. The design and construction of all sidewalks, curbs, gutters and walkways shall meet or exceed minimum standards.
- L. The design of all sidewalks shall provide for a gradual taper rather than an abrupt transition between sidewalks of different widths or alignments.
- M. A form and subgrade inspection by the City is required before any sidewalks are poured.
- N. Monolithic pour of curb, gutter and sidewalk is not allowed.
- O. Driveway requirements are covered in Section 4.14.
- P. Cement concrete curb and gutter shall be used for all street edges unless otherwise approved by the Public Works Superintendent. All curbs and gutters shall be constructed of Class "B" Cement Concrete in accordance with Section 6-02 of WSDOT Standard Specifications. Curbs shall be of the vertical face type. No rolled curb and gutter profile will be allowed without specific approval of the

Public Works Superintendent. If rolled curbs are approved, all sidewalks within the Plat shall be a minimum 5 inches thick.

- Q. Extruded curb and gutter per WSDOT Standard Specifications is allowed only with the specific approval of the Public Works Superintendent.
- R. Form and subgrade inspection by the City are required before curb and gutter are poured.
- S. Forms, wood or steel, shall be staked securely in place, true to line and grade.
- T. Sufficient support shall be given to the form to prevent movement in any direction, resulting from the weight of the concrete or the concrete placement. Forms shall not be set until the subgrade has been compacted within one inch of the established grade. Forms shall be clean and well-oiled prior to setting in place. When set, the top of the form shall not depart from grade more than one-eighth (1/8) inch when checked with a ten-foot straightedge. The alignment shall not vary more than one-fourth (1/4) inch in ten (10) feet. Immediately prior to placing the concrete, forms shall be carefully inspected for proper grading, alignment and rigid construction. Adjustments and repairs as needed shall be completed before placing concrete.
- U. The subgrade shall be properly compacted and brought to specified grade before placing concrete. The subgrade shall be thoroughly dampened immediately prior to the placement of the concrete. Concrete shall be spaded and tamped thoroughly into the forms to provide a dense, compacted concrete free of rock pockets. The exposed surfaces shall be floated, finished and brushed longitudinally with a fiber hair brush approved by the City's inspector and/or engineer.
- V. The face form of the curb shall be stripped at such time in the early curing as will enable inspection and correction of all irregularities that appear thereon.
- W. Forms shall not be removed until the concrete has set sufficiently to retain its true shape. The face of the curb shall be trowled with a tool cut to the exact section of the curb and at the same time maintain the shape, grade and alignment of the curb. The exposed surface of the curb shall be brushed with a fiber hair brush.
- X. White pigmented or transparent curing compounds shall be applied to all exposed surfaces immediately after finishing. Transparent curing compounds shall contain a color dye of sufficient strength to render the film distinctly visible on the concrete for a minimum period of four (4) hours after application.
- Y. When the curb section is to be placed separately, the surface of the gutter directly underneath the curb section shall be covered with a protective cover to protect that

area from the curing agent when the gutter is sprayed. This cover must remain in place until the curb is placed. Care shall be taken in the placing of this cover to prevent the steel dowels from puncturing the cover.

- Z. If, at any time during the curing period any of the forms are removed, a coat of curing compound shall be applied immediately to the exposed surface. The curing compound shall be applied in sufficient quantity to obscure the natural color of the concrete. Additional coats shall be applied if the City Inspector determines that the coverage is not adequate. The concrete shall be cured for the minimum period of 72 hours' time set forth in Section 8-04 of the Standard Specifications.
- AA. Joints shall be constructed in the manner and at the locations shown in Details SW-1 and SW-2. They shall be cleaned and edged as shown on the drawings. All expansion and contraction joints shall extend entirely through the curb section above the pavement surface. Joint filler in the curb shall be normal to the pavement and in full and constant contact with pavement joint filler.
- BB. High visibility handicap ramps shall be constructed as integral parts of all sidewalks in accordance with the current standards of applicable state law.
- CC. Sidewalks shall be constructed to provide for high visibility handicap ramps in accordance with the current standards of applicable state law. Details provided herein are minimum and subject to change. It is the Developer's responsibility to verify current ADA requirements and install same per current standards even if City has approved of construction drawings with non-compliant ADA requirements.
- DD. Handicap Ramps shall be constructed of Portland Cement Concrete. Form and subgrade inspection by the City are required before handicap ramps are poured.
- EE. All surveying and staking shall be performed by an engineer or surveying firm employed by the Developer and capable of performing such work. The engineering or surveyor directing and/or performing such work shall be currently licensed by the State of Washington to perform said task.
- FF. A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
- GG. Stake top back of curb at a consistent offset for vertical and horizontal alignment every 25 feet (50 feet in tangent sections).
- HH. Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT Standard Specifications.

- II. At a minimum, one slump test and 2 test cylinders shall be taken once per day. All other testing frequencies shall be as specified in the Testing and Sampling Table in Section 4B.18.
- JJ. City shall be notified before each phase of sidewalk, curb, and gutter construction commences.

4.20 ILLUMINATION

- A. Illumination shall be required unless otherwise directed by the City Council. All illumination shall be in compliance with the requirements specified by the Pacific County PUD. The style shall be compatible with the structural grade aluminum poles and luminaires presently existing on south First Avenue and Howerton Boulevard. Light pollution shall be avoided.

4.21 SIGNALIZATION

- A. Signalization will be required if warranted as determined by an existing study and/or transportation study performed by the Developer at the request of the City. The developer shall pay the entire cost of signalization if signalization is warranted.

4.22 PARKING LOTS

- A. A building permit is required prior to surfacing any unsurfaced designated parking area.
- B. Storm water detention shall be provided and shall follow the criteria as set forth in Chapter 5 of these standards.
- C. Four sets of plans and specifications shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on site retention or detention, matching street and/or sidewalk grades, access locations, parking layout, and to check for future street improvement conformity and City zoning regulations.
- D. Parking lot surfacing materials shall satisfy the requirement for a permanent all-weather surface. Asphalt concrete pavement and cement concrete pavement satisfy this requirement and are approved materials. Gravel surfaces are not acceptable. Other surface material types may be approved by the City on a case by case basis.

CHAPTER 5

STORM DRAINAGE STANDARDS

5.1 GENERAL

The standards established by this chapter are intended to represent the minimum standards for the design and construction of storm drainage facilities. Greater or lesser requirements may be mandated by the City due to localized conditions. Storm drainage revisions, additions, modification, or changes shall be made in compliance with City standards, ordinances, and Best Management Practices as identified by the current version of the 2012 Washington State Department of Ecology Stormwater Management Manual for Western Washington (hereinafter called “Stormwater Manual”) or as modified in this chapter. Adequate provisions shall be made for storm drainage, storm sewers, and associated appurtenances sufficient to transmit maximum runoff from the 100 year, 24 hour event.

If warranted based on the condition and capacity of the existing storm drainage infrastructure (or lack thereof) and, impacts caused by the proposed development, off-site improvements may be required, at the Public Works Superintendent’s discretion, to mitigate impacts caused by the proposed development.

5.2 DESIGN STANDARDS

On-site detention or infiltration systems shall be provided to ensure that stormwater flow rates following development do not exceed the pre-development rate in accordance with the Stormwater Manual. The design of storm drainage and detention system shall depend on their type and local site conditions. The design elements of storm drainage systems shall conform to City Standards as set forth herein. The following design considerations shall apply:

- A. The use of commercial parking lots for detention of stormwater will be reviewed by the Public Works Superintendent and approved or denied based on the design, location and general parameters of the project. The detention area shall be situated away from areas of pedestrian movement unless means for rapid closing of the areas is incorporated in the design. The maximum depth of water in parking lot storage shall be limited to 6 inches. Curbs cannot be used for retaining storage.
- B. Maximum catch basin spacing shall be 200 feet on road grades up to 3%, 300 feet when the road grade is 3% or greater and 500 feet maximum on main storm drains between access structures, whether catch basins or manholes. No surface water (unless otherwise approved in writing by the City Engineer) shall cross any roadway. In addition, catch basins shall be placed whenever the length of surface

drainage exceeds 300 feet on road grade, extending either direction from crest or sag on vertical curves. Vaned grates shall be employed on street grades exceeding 6% slope.

- C. Plans for storm drainage shall indicate where the stormwater will be treated, detained, and discharged or infiltrated. The plans and drainage calculations must show that the pipes and channels downstream from the discharge point (a minimum of 1/4 mile) can carry the runoff without damage to the adjoining properties or surcharging of the system. The Public Works Superintendent may require that the downstream analysis be continued to incorporate sensitive areas such as steep slopes. Provisions shall be made for detainage and/or retainage of stormwater in order to control the amount of storm runoff to the standards in the Stormwater Manual.
- D. Where storm drains run outside an existing public right-of-way, permanent easements will be required for public or private maintenance as may be required and warranted. Such easement shall be a minimum of 15 feet in width unless otherwise approved or required by the City. Where the City is to maintain the storm drain, a permanent easement will be required having a minimum width of 15 feet. A construction (temporary) easement of suitable width shall also be provided.
- E. Storm Drain Detention Systems shall be, at a minimum, designed and constructed in strict compliance with the Stormwater Manual and any amendments thereto. Local prevailing conditions may warrant higher standards as determined by the Public Works Superintendent. The Developer and/or Homeowners' Association shall enter into a formal, legally binding agreement, as approved by the City Attorney, regarding the landowner's duties and obligations regarding their ownership, operation and maintenance of the system.
- F. The maximum infiltration rate used for design purposes shall be 20-inches/hr unless onsite Pilot Infiltration Tests are performed, as discussed in the Stormwater Manual.
- G. All portions of publicly owned and maintained detention and or infiltration facilities shall be in public right-of-way or dedicated land tracts.
- H. All infiltration systems shall be open at the top to allow for maintenance. No underground, open bottom tanks, vaults, pipes or similar structures are allowed for infiltration.
- I. The General Notes, numbered 1 thru 10, as shown and further referenced herein shall be included or referenced on any plans submitted to the City for construction approval dealing with storm system design.

- J. Storm Drainage Ponds shall have a minimum side slope of 3:1 (H:V). The perimeter fence shall be 4 feet high and landscaped so as to hide the fence.
- K. The downstream analysis shall extend for a distance of one-mile or to the receiving water whichever is less. In no case shall the downstream analysis extend for less than 1/4-mile. Downstream erosion protection may be required at the direction of the Public Works Superintendent.

GENERAL NOTES (STORM DRAIN CONSTRUCTION)

- 1. All workmanship and materials shall be in accordance with City of Ilwaco Standards and the most current version of the State of Washington Standard Specifications for Road, Bridge and Municipal Construction (WSDOT/APWA). Where a conflict between the two standards exists, the more restrictive shall apply.
- 2. Temporary erosion/water pollution measures shall be required in accordance with Section 1-07.15 of the Standard Specifications.
- 3. Comply with all other permits and other requirements by the City of Ilwaco or other governing authority or agency as may be applicable.
- 4. A preconstruction meeting shall be held with the City prior to the start of construction.
- 5. All storm mains, catch basins, curb inlets, culverts, outlet control structures and detention or infiltration areas shall be staked for grade and alignment by an engineering or surveying firm capable of performing such work, and currently licensed in the State of Washington to do so.
- 6. Storm drain pipe shall meet the following requirements:
 - A. PVC pipe shall conform to ASTM D 3034-73 SDR 35 for 4" thru 15" diameter PVC pipe, and shall conform to ASTM F 679 for 18" thru 27" diameter PVC pipe, with joints and gaskets conforming to ASTM D 3212 and ASTM F 477.
 - B. Polyethylene smooth wall pipe per Advanced Drainage Systems (ADS) N-12, bell and spigot, constructed per WSDOT Standard Specifications 7-04. Note: This type of pipe will only be approved with the City's specific written approval. Approval shall be based on site specific conditions and if additional on-site inspection time for witnessing proper pipe installation can be scheduled by the City.

7. Special structures, oil/water separators and outlet controls shall be installed per plans and manufacturers recommendations.
8. Provide traffic control plan(s) as required in accordance with MUTCD.
9. Call underground locate line 1-800-424-5555 minimum 48 hours prior to any excavations.
10. Where connections require "field verifications", connection points will be exposed by contractor and fittings verified 48 hours prior to distributing shut-down notices.
11. Storm drain pipelines shall be installed to the far property line(s) to serve adjacent tributary areas a may be warranted. They shall be appropriately sized to accommodate flows as further identified herein. Pipes shall be designed to facilitate a minimum 3 feet/second flow unless otherwise approved by the Public Works Superintendent.

5.3 CONVEYANCE

- A. Pipe: Storm drain pipe within a public right-of-way or easement shall be sized to carry the 100-year runoff from the contributing tributary area.
- B. The minimum pipe size shall be 12 inches diameter. Runoff shall be computed and, if the flow requires it, a larger pipe shall be used. Nothing shall preclude the City from requiring the installation of a larger sized main if the Public Works Superintendent determines a larger size is needed to serve adjacent areas or for future service.
- C. Storm drain gradients shall in be compliance Table C1-1, Minimum Slopes of Sewers, by Size, Dept. of Ecology "Criteria for Sewage Works Design".
- D. All pipe for storm mains shall be "pre-approved" by the Public Works Superintendent based on localized conditions and comply with one of the following types:
 1. PVC pipe shall conform to ASTM D 3034-73 SDR 35 for 4" thru 15" diameter PVC pipe, and shall conform to ASTM F 679 for 18" thru 27" diameter PVC pipe, with joints and gaskets conforming to ASTM D 3212 and ASTM F 477.
 2. Polyethylene smooth wall pipe per Advanced Drainage Systems (ADS) N-12, bell and spigot, constructed per WSDOT Standard Specifications 7-04.

Note: This type of pipe will only be approved with the City's specific written approval

5.4 CONNECTIONS

- A. Connections of storm drain pipe leading from an existing street inlet location may be made into an existing main storm drain only with a new structure, subject to case-by-case review and approval of the Public Works Superintendent and subject to the following additional requirements:
 - 1. The inletting structure shall be a catch basin and not a simple inlet lacking a catch or drop section.
 - 2. Length of inlet connection shall be as approved by the Public Works Superintendent.

5.5 SURVEY STAKING

- A. All surveying and staking shall be performed by an engineering or surveying firm employed by the Developer and capable of performing such work. The engineer or surveyor directing and/or performing such work shall be currently licensed by the State of Washington to perform said tasks.
- B. A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
- C. The minimum staking of storm sewer systems shall be as follows:
 - 1. Stake centerline alignment every 25 feet with cuts and/or fills to bottom of trench.
 - 2. Stake location of all catch basins/manholes and other fixtures for grade and alignment.
 - 3. Stake location, size and depth of retention/detention facility.
 - 4. Stake finished grade of catch basin/manhole rim elevation and invert elevations of all pipes in catch basins, manholes, and those that daylight.

5.6 TRENCH EXCAVATION

- A. Clearing and grubbing where required shall be performed within the easement or public right-of-way as permitted by the City and/or governing agencies. Debris

resulting from the clearing and grubbing shall be disposed of by the owner or contractor in accordance with the terms of all applicable permits.

- B. Trenches shall be excavated to the line and depth designated by the City to provide a minimum of 36-inches of cover over the pipe. Except for unusual circumstances where approved by the City, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space as allowed by the governing agency and in compliance with all safety requirements of the prevailing agencies. The trench shall be kept free from water until joining is complete. Surface water shall be diverted so as not to enter the trench. The contractor shall maintain sufficient pumping equipment on the job to insure that these provisions are carried out.
- C. The contractor shall perform all excavation of every description and whatever substance encountered and boulders, rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below storm line grade. Where materials are removed from below the pipeline grade, the trench shall be backfilled to grade with material satisfactory to the City and thoroughly compacted.
- D. Trenching and shoring operations shall not proceed more than 100 feet in advance of pipe laying without specific written approval of the City, and shall be in conformance with Washington Industrial Safety and Health Administration (WISHA) and Office of Safety and Health Administration (OSHA) Safety Standard.
- E. The bedding course shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to facilitate the construction of pipe joints.

5.7 BEDDING

- A. Gravel backfill for pipe bedding shall be installed in conformance with Section 2-09 of the Standard Specifications (WSDOT).

5.8 BACKFILLING

- A. Backfilling and surface restoration shall closely follow installation of pipe so that not more than 100 feet is left exposed during construction hours without approval of the City. Selected material shall be placed and compacted around and under the storm drain by hand tools. Special precautions should be provided to protect the pipe to a point 12 inches above the crown of the pipe. The remaining backfill shall be compacted to 95 percent of the maximum density in traveled areas or CDF, 90 percent outside driveway, roadways, road prism, shoulders, parking or

other traveled areas. Where governmental agencies other than the City have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having jurisdiction. Typically, trench sections crossing existing roadways, in roadway "prisms" or beneath traffic bearing areas shall be backfilled and compacted with 5/8-inch minus crushed rock. Due to localized conditions, the City may allow/permit the backfill of the trench section with suitable excavated material, as determined by the City, or if this material is not available from trenching operations, the City may order the placing and compaction of gravel base conforming with Section 9-03.10 of the Standard Specifications (WSDOT) for backfilling the trench. Under certain circumstances, the City may require CDF in lieu of gravel or other back-fill material. Where CDF is required, it shall meet WSDOT standards and requirements. All excess material shall be loaded and hauled to waste.

5.9 STREET PATCHING AND RESTORATION

- A. See Chapter 4 for requirements regarding street patching and trench restoration.

5.10 EROSION CONTROL

- A. The detrimental effects of erosion and sedimentation shall be minimized by conforming to the following general principles:
 - 1. Soil shall be exposed for the shortest possible time;
 - 2. Reducing the velocity and controlling the flow of runoff;
 - 3. Detaining runoff on the site to trap sediment; and
 - 4. Releasing runoff safely to downstream areas.
- B. In applying these principles, the Developer and/or Contractor shall provide for erosion control by conducting work in workable units; minimizing the disturbance to cover crop materials; providing mulch and/or temporary cover crops, sedimentation basins, and/or diversions in critical areas during construction; controlling and conveying runoff; and establishing permanent vegetation and installing erosion control structures as soon as possible.

- C. Trench mulching will be required where there is danger of backfill material being washed away due to steepness of the slope along the direction of the trench, backfill material shall be compacted and held in place by covering the disturbed area with straw and held with a covering of jute matting or wire mesh anchored in place.
- D. Cover Crop Seeding.
1. A cover crop shall be sown in all areas excavated or disturbed during construction that were not paved, landscaped and/or seeded prior to construction. Areas landscaped and/or seeded prior to construction shall be restored to their original or superior condition.
 2. Contact the City Clerk for water charges if use of City water is contemplated and the Public Works Superintendent for use of a hydrant for water in furtherance of seeding.
 3. Hydrants shall only be opened and closed by members of the City crew.
 4. Cover-crop seeding shall follow backfilling operations. The Developer and/or Contractor shall be responsible for protecting all areas from erosion until the cover crop affords such protection.
 5. The cover crop shall be re-seeded if required and additional measures taken to provide protection from erosion until the cover crop is capable of providing protection.
 6. During winter months, the Contractor may postpone seeding, if conditions are such that the seed will not germinate and grow. The Developer and/or Contractor will not, however, be relieved of the responsibility of protecting all areas until the cover crop has been sown and affords protection from erosion.
 7. The cover crop shall be sown at a rate of 10 to 15 pounds of seed per acre using a hand or power operated mechanical seeder capable of providing a uniform distribution of seed.

5.11 FINISHING AND CLEANUP

- A. After all other work on this project is completed and before final acceptance, the entire roadway, including the roadbed, planting, sidewalk areas, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and

construction areas shall be neatly finished to the lines, grades and cross sections of a new roadway consistent with the original section, and as hereinafter specified.

- B. On water system construction where all or portions of the construction is in undeveloped areas, the entire area which has been disturbed by the construction shall be shaped so that upon completion the area will present a uniform appearance, blending into the contour of the adjacent properties. All other requirements outlined previously shall be met. All pipes, valves, tanks, reservoirs, boost pumps, boost pump stations and building associated therewith shall be cleaned of all debris and foreign material.
- C. Slopes, sidewalk areas, planting areas and roadway shall be smoothed and finished to the required cross section and grade by means of a grading machine insofar as it is possible to do so without damaging existing improvements, trees and shrubs. Machine dressing shall be supplemented by hand work to meet requirements outlined herein, to the satisfaction of the City Inspector and/or the Public Works Superintendent.
- D. Upon completion of the cleaning and dressing, the project shall appear uniform in all respects. All graded areas shall be true to line and grade. Where the existing surface is below sidewalk and curb, the area shall be filled and dressed out to the walk. Wherever fill material is required in the planting area, the finished grade shall be elevated to allow for final settlement, but nevertheless, the raised surface shall present a uniform appearance.
- E. All rocks in excess of one (1) inch diameter shall be removed from the entire construction area and shall be disposed of the same as required for other waste material. In no instance shall the rock be thrown onto private property. Overhang on slopes shall be removed and slopes dressed neatly so as to present a uniform, natural, well-sloped surface.
- F. All excavated material at the outer lateral limits of the project shall be removed entirely. Trash of all kinds resulting from clearing and grubbing or grading operations shall be removed and not placed in areas adjacent to the project. Where machine operations have broken down brush and trees beyond the lateral limits of the project, the Developer and/or Contractor shall remove and dispose of same and restore said disturbed areas at his own expense.
- G. Drainage facilities such as inlets, catch basins, culverts, and open ditches shall be cleaned of all debris, which is the result of the Developer and/or Contractor's operations.
- H. All pavements and oil mat surfaces, whether new or old, shall be thoroughly cleaned. Existing improvements such as Portland cement concrete curbs, curb

and gutters, walls, sidewalks, and other facilities, which have been sprayed by the asphalt cement, shall be cleaned and re-painted where needed, all to the satisfaction of the Public Works Superintendent.

- I. Castings for monuments, water valves, vaults and other similar installations which have been covered with the asphalt material shall be cleaned to the satisfaction of the Public Works Superintendent.

5.12 GENERAL GUARANTEE AND WARRANTY

- A. The Developer shall be required, upon completion of the work and prior to acceptance by the City, to furnish the City a written guarantee covering all material and workmanship for a period of three years after the date of final acceptance and he shall make all necessary repairs during that period at his own expense, if such repairs are necessitated as the result of furnishing poor materials and/or workmanship.
- B. The Developer shall obtain warranties from the contractors, subcontractors and suppliers of material or equipment where such warranties are required, and shall deliver copies to the City upon completion of the work. Delivery of such warranties to the City shall not relieve the Developer of liability under his guarantee.
- C. Easement documents, if applicable, shall be filed and recorded with the County Auditor's office and the documents reviewed by the City prior to project acceptance.

CHAPTER 6

SANITARY SEWER STANDARDS

6.1 GENERAL

- A. The standards established by this chapter are intended to represent the minimum standards for the design and construction of sanitary sewer facilities. Greater or lesser requirements may be mandated by the City due to localized conditions. Washington State Department of Ecology's Design Standards shall also be employed by the City in its review and approval of system connections, extensions, and/or modifications.
- B. "Off-site" improvements may be warranted based on (1) the existing condition and capacity of the existing sanitary infrastructure and, (2) impacts caused by the proposed development. These off-site improvements (in addition to "on-site" improvements as may be warranted) will be as determined by the Public Works Superintendent so as to reasonably mitigate impacts caused by development.
- C. All wastewater mains shall have a capacity at least 150% of the expected maximum size required for the development.
- D. All wastewater systems shall have telemetry satisfactory to the Public Works Superintendent on all associated lines, tanks, reservoirs, pumps, valves, vents, and associated vaults and buildings for sampling and monitoring those items such as essential chemistry, turbidity, pressure, levels, flow, and status, which may be required by the Public Works Superintendent.
- E. If a lot is to have a use on it which requires sewage disposal, the property owner or developer must install a connecting line to the City sewer line.
- F. A building or structure requiring sewage disposal must be connected to a City sewer line before the completion of the construction of a building or structure.
- G. Each service (primary structure) shall have a separate lateral connecting it to the main and a separate clean out. If more than one primary structure is connected to the public sewer system by a single connection, a mutually beneficial easement must be granted to the respective properties over the shared portions of the connection, thus assuring that all properties involved will have perpetual use of the side sewer. Provisions must also be made for maintenance and access for repair. The property owner must:
 - 1. Record the easements(s) with the County Auditor; and

2. give a copy to the City.

6.2 DESIGN STANDARDS

The design of sanitary sewer systems shall be dependent on local site conditions. The design elements of sanitary sewer systems shall conform to minimum City Standards set forth in this Chapter.

- A. Detailed plans which provide the location, size, type and direction of flow of the proposed sewers and the connection with existing sewers shall be submitted for the City's review. These plans shall be separate from water plans.
- B. Project plans should have a horizontal scale of not more than 50 feet to the inch and a vertical scale of not more than 5 feet to the inch. Plan views shall be drawn to a corresponding horizontal scale. Plans and profiles shall show:
 1. Locations of streets, right-of-ways, existing utilities, and sewers;
 2. Ground surface, pipe type, class and size, manhole stationing, invert and surface elevation at each manhole, and grade of sewer between adjacent manholes. All manholes shall be numbered on the plans and correspondingly numbered on the profile. Where there is any question of the sewer being sufficiently deep to serve any residence, the elevation and location of the basement floor, if basements are served, shall be plotted on the profile of the sewer, which is to serve the house in question. The Developer shall state that all sewers are sufficiently deep to serve adjacent basements, except where otherwise noted on the plans;
 3. All known existing structures, both above and below ground, which might interfere with the proposed construction, particularly water mains, gas mains, storm drains, overhead and underground power lines, telephones lines, and television cables;
 4. All utility easements, including County recording numbers; and
 5. Details in scale drawings that clearly show special sewer joints and cross-sections, and sewer appurtenances such as manholes and related items and all other items as required by the City to clearly identify construction items, materials, and/or methods.

- C. Construction of new sewer systems or extensions of existing systems will be allowed only if the existing receiving system is capable of supporting the added hydraulic load. Sewers shall be extended to the far property line(s) to facilitate future extensions of same.
- D. Collection and interceptor sewers shall be designed and constructed for the ultimate development of the tributary areas.
- E. Sewer systems shall be designed and constructed to achieve total containment of sanitary wastes and maximum exclusion of infiltration and inflow.
- F. Computations and other data used for design of the sewer system shall be submitted to the City for approval.
- G. The sewage facilities shall be constructed in conformance with the current version of the Washington State Department of Transportation, Standard Specifications for Road, Bridge, & Municipal Construction, and current amendments thereto, State of Washington, revised as to form to make reference to Local Governments, and as modified by any special City requirements and standards.
- H. Material and installation specifications shall contain appropriate requirements that have been established by the industry in its technical publications, such as ASTM, AWWA, WPCF, UPC and APWA standards. Requirements shall be set forth in the specifications for the pipe and methods of bedding and backfilling so as not to damage the pipe or its joints, impede cleaning operations and future tapping, nor create excessive side fill pressure or ovalation of the pipe, nor seriously impair flow capacity.
- I. All sewers shall be designed to prevent damage from superimposed loads. Proper allowance for loads on the sewer because of the width and depth of trench should be made. When standard-strength sewer pipe is not sufficient, extra-strength pipe shall be used.
- J. All pipe shall be laid in straight lines and at uniform rate of grade between manholes. Variance from established line and grade shall not be greater than one-half inch (1/2"), provided that such variation does not result in a level of reverse sloping invert; provided, also, that variation in the invert elevation between adjoining ends of pipe, due to non-concentricity of joining surface and pipe interior surfaces, does not exceed one-sixty-fourth inch (1/64") per inch of pipe diameter, or one-half inch (1/2") maximum. Any corrections required in line and grade shall be reviewed with the City and/or the Public Works Superintendent and shall be made at the expense of the Developer and/or Contractor.

- K. Deflection tests shall be performed on all PVC sewer mains and the deflection test limit shall be 5.0 percent of the base inside diameter of the pipe.
- L. Prior to final inspection, all pipelines shall be tested, flushed and cleaned and all debris removed. A pipeline "cleaning ball" of the proper diameter for each size of pipe shall be flushed through all pipelines prior to final inspection. Hydrant meters shall be acquired (deposit required) from the City and utilized by the Contractor for all water withdrawn from the City of Ilwaco system for flushing purposes.
- M. Before sewer lines are accepted, the Contractor/Developer shall perform a complete televised inspection of the sewer pipe and appurtenances and shall provide to the City an audio-visual tape recording of these inspections. All equipment and materials shall be compatible with existing City equipment. It shall be the Contractor/Developer's responsibility to confirm equipment compatibility with the City prior to inspection.
- N. At all times during the televised inspection process, the City's Utility Superintendent and/or his designated representative shall be present. The City's Public Works Superintendent shall be notified forty-eight (48) hours prior to any televised inspection.
- O. After all other work is completed and before final acceptance, the entire roadway, including the roadbed, planting, sidewalk areas, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections for a new roadway consistent with the original section.
- P. The Developer shall be required, upon completion of the work and prior to acceptance by the City, to furnish the City with a written guarantee covering all material and workmanship for a period of two years after the date of final acceptance and the Developer shall make all necessary repairs during that period at his own expense, if such repairs are necessitated as the result of furnishing poor materials and/or workmanship. The Developer shall obtain warranties from the contractors, subcontractors and suppliers of material or equipment where such warranties are required, and shall deliver copies to the City upon completion of the work.

6.3 GENERAL REQUIREMENTS

- A. Prior to construction, the sewer plans shall be reviewed and approved by the Department of Ecology and an affidavit stating such be on file at the City's Public Works Department.

- B. Prior to construction, the Contractor shall notify the City for a pre-construction meeting.
- C. Work shall be performed only by licensed and bonded contractors with a demonstrated experience in laying public sewer mains of the type being proposed for construction.
- D. Prior to any work being performed, the Contractor shall contact the Public Works Superintendent and provide the Public Works Superintendent with the Contractor's construction schedule. The Contractor will submit changes in the construction schedule to the Public Works Superintendent in a timely manner.
- E. The Contractor shall obtain approval of materials to be used from the City prior to ordering or delivery of materials.
- F. Sewer mains shall be laid only in dedicated street right-of-way or easements shown on preliminary plats or which have been exclusively granted to the City. A street is normally not officially recognized until the plat, which created it has been filed (recorded) with the County Auditor.
- G. Sewer mains shall run parallel to and 5 feet southerly or westerly of street centerline where possible. Sewer mains shall maintain a minimum 10 foot horizontal separation from proposed or existing water mains.
- H. The maximum distance between manholes shall be 400 feet unless specifically approved otherwise by the Public Works Superintendent.
- I. All pipe shall have a minimum of thirty six (36) inches of cover (18" in the case of a side sewer on private property). The City reserves the right to require a minimum of three feet of cover unless topography, existing facilities or other future improvements prohibit this minimum cover for installation.
- J. The minimum slope for 8" gravity mains shall be 0.5% (except the minimum slope for dead end runs shall be 1.0% for 8" gravity mains) and the minimum slope for 6" side sewer laterals shall be 2.0%.
- K. All side sewer laterals shall be of the same material as the main line.
- L. Each side sewer lateral shall be equipped with a 6" x 6" tee, with an approved water-tight cap, located adjacent to, but within, the public right-of-way, to be utilized as a clean-out. When required by either the City's Inspector or Public Works Superintendent, a watertight six-inch capped stub shall be installed which extends vertically from the 6" x 6" tee to within 18 inches of finished grade.

- M. Each side sewer lateral shall have an approved water-tight cap at the termination of the stub. The cap shall be adequately “blocked” to satisfactorily resist air pressure testing.
- N. Each side sewer lateral shall have a twelve (12) foot long 2” x 4” wood “marker” at the termination of the stub. The “marker” shall extend from the bottom of the trench to above finished grade. Above the ground surface, it shall be painted “white” with “S/S” and the depth, in feet, stenciled in black letters 2” high.
- O. Front lot corners shall be staked by a surveyor prior to construction for side sewer tee location(s).
- P. Side sewers shall generally be located at the lowest property corner and located a minimum of 10 feet from the side lot line and extend a minimum of 10 feet past the street right-of-way line (or property line).
- Q. Side sewer connections if allowed directly into manholes shall be constructed to match the sewer main crown (outlet) and the manhole channeled accordingly.
- R. Manholes, where sewer extension may occur, shall be provided with knock-outs and channeled accordingly.
- S. Manholes shall be provided with a 0.10 foot drop across the channel. Pre-channeled manholes are not allowed.
- T. Locking lids shall be provided for all manholes located outside pavement areas and all manhole lids shall have the word “sewer” cast integrally onto its surface. See Standard Details, attached hereto and incorporated herein for all purposes.
- U. Concrete collars shall be placed around all frames per the Standard Details for manholes located in non-paved areas.
- V. Pipe connections to manholes shall be as follows:
 - 1. PVC Pipe - Cast or grout a watertight manhole coupling (see detail) into manhole wall.
 - 2. D.I. Pipe - Both bell and spigot joints and flexible couplings shall be 12” maximum distance from manhole wall.
 - 3. PVC and D.I. pipe, optional - Core the manhole and connect sewer pipe with a water-tight flexible rubber boot in manhole wall, Kor-N-Seal boot or equal.

- W. Provide the Public Works Superintendent and City Inspector a copy of the cut sheets prior to construction.
- X. Pipe trenches shall not be backfilled until pipe and bedding installation have been inspected and approved by the City's Inspector.
- Y. Final air testing shall not be accepted until after the finished paving is accomplished, all other underground utilities have been installed, and the lines have been flushed, cleaned, and deflection tested.
- Z. Manhole rim and invert elevations shall be field verified after construction by the Developer's engineer(s) and the "record" drawings individually stamped by a Washington State licensed professional engineer or surveyor who shall attest to the fact that the information is correct.
- AA. All commercial, industrial, or school food establishments shall be equipped with an approved grease interceptor. The grease interceptor shall be located to facilitate inspection and maintenance.

6.4 MATERIALS AND TESTING

A. Sewer Mains, Laterals and Force Mains

1. Sewer mains to be installed shall be of material noted below:
 - a. Gravity Sewer and Laterals:
 1. PVC Pipe 3'-25' Cover
 2. DI Pipe (Class 52) <3' cover; 25' and over cover or slopes of 18 percent or greater
 3. HDPE - 3' - 25' Cover
 - b. Force Main:
 1. DI Pipe Class 52
 2. HDPE (SDR 9 - minimum)
2. Gravity PVC pipe (15" diameter and smaller) shall be a minimum Class SDR 35 and be manufactured in accordance with ASTM D3034. The pipe and fittings shall be furnished with bells and spigots, which are integral with the pipe wall. Pipe joints shall use flexible elastomeric gaskets conforming to ASTM D3212. Nominal laying lengths shall be 20 feet and 13 feet.
4. The ductile iron pipe shall conform to ANSI/AWWA C151/A21.51-91 Standards, and current amendments thereto, except the ductile iron pipe

shall be thickness Class 52 for gravity sewers and Class 52 for force mains. Grade of iron shall be a minimum of 60-42-10. The pipe shall be cement lined to a minimum thickness of 1/16", and the exterior shall be coated with an asphaltic coating. Each length shall be plainly marked with the manufacturer's identification, year case, thickness, class of pipe and weight.

5. HDPE pipe shall manufactured in accordance with ASTM D3035 for gravity sewers and AWWA C901/C906 for pressure sewers.
6. Type of joint shall be mechanical joint or push-on type, employing a single gasket, such as "Tyton", except where otherwise calling for flanged ends. Bolts furnished for mechanical joint pipe and fittings shall be high strength ductile iron, with a minimum tensile strength of 50,000 psi.
7. Restrained joint pipe, where required shall be push-on joint pipe with "Fast Tight" gaskets as furnished by U.S. Pipe or equal for 12" diameter and smaller pipe and "TR FLEX" as furnished by U.S. Pipe or equal for 16" and 24" diameter pipes. Mechanical joint pipe with retainer glands (grip rings) as manufactured by "Romac" may also be required at the discretion of the City. The restrained joint pipe shall meet all other requirements of the non-restrained pipe.
8. All pipe shall be jointed by the manufacturer's standard coupling, be all of one manufacturer, be carefully installed in complete compliance with the manufacturer's recommendations.
9. All fittings shall be short-bodied, ductile iron complying with applicable ANSI/AWWA C110 or C153 Standards for 350 psi pressure rating for mechanical joint fittings and 250 psi pressure rating for flanged fittings. All fittings shall be lined and either mechanical joint or flanged, as indicated on the Plans.
10. Fittings in areas shown on the Plans for restrained joints shall be mechanical joint fittings with a mechanical joint restraint device. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG, or ROMAC "Grip Ring", as required and approved by the Public Works Superintendent.
11. All couplings shall be ductile iron mechanical joint sleeves.
12. The sewer pipe, unless otherwise approved by the Public Works Superintendent, shall be laid upgrade from point of connection on the

existing sewer or from a designated starting point. The sewer pipe shall be installed with the bell end forward or upgrade. When pipe laying is not in progress, the forward end of the pipe shall be kept tightly closed with an approved temporary plug. Wherever movable shoring (steel box) is used in the ditch, pipe shall be restrained by use of a winch mounted in the downstream manhole and a line of sufficient strength threaded through the pipe and set tight before each move. Any indication that joints are not being held shall be sufficient reason for the City to require restraints, whether or not movable shoring is being used.

13. All pipe shall be laid in straight lines and at uniform rate of grade between manholes. Variance from established line and grade shall not be greater than one-half inch (1/2"), provided that such variation does not result in a level of reverse sloping invert; provided, also, that variation in the invert elevation between adjoining ends of pipe, due to non-concentricity of joining surface and pipe interior surfaces, does not exceed one-sixty-fourth inch (1/64") per inch of pipe diameter, or one-half inch (1/2") maximum. Any corrections required in line and grade shall be reviewed with the Public Works Superintendent and shall be made at the expense of the Developer.
14. All extensions, additions and revisions to the sewer system, unless otherwise indicated, shall be made with sewer pipe jointed by means of a flexible gasket, which shall be fabricated and installed in accordance with the manufacturer's specifications.
15. All joints shall be made up in strict compliance with the manufacturer's recommendations and all sewer pipe manufacture and handling shall meet or exceed the ASTM and CPAW recommended specifications, current revisions.
16. Pipe handling after the gasket has been affixed shall be carefully controlled to avoid disturbing the gasket and knocking it out of position, or loading it with dirt or other foreign material. Any gaskets so disturbed shall be removed, cleaned, relubricated if required, and replaced before the rejoining is attempted.
17. Care shall be taken to properly align the pipe before joints are entirely forced home. During insertion of the tongue or spigot, the pipe shall be partially supported by hand, sling or crane to minimize unequal lateral pressure on the gasket and to maintain concentricity until the gasket is properly positioned. Since most flexible gasketed joints tend to creep apart when the end pipe is deflected and straightened, such movement shall be held to a minimum once the joint is home.

18. Sufficient pressure shall be applied in making the joint to assure that it is home, as described in the installation instructions provided by the pipe manufacturer. Sufficient restraint shall be applied to the line to assure that joints once home are held so, until fill material under and alongside the pipe has been sufficiently compacted. Great care shall be exercised when dragging a trench box up or down trench after backfilling to avoid dragging the pipe. Such dragging can result in joint separation. At the end of the work day, the last pipe laid shall be blocked in an effective way to prevent creep during “down time.”
19. For the joining of dissimilar pipes suitable adapter couplings shall be used which have been approved by the City Inspector and/or the Public Works Superintendent
20. All gravity sewer pipe shall be bedded with pea gravel. The PVC pipe shall be bedded from a depth of four (4) inches below the pipe to eight (8) inches above the pipe and ductile iron gravity sewer pipe shall be bedded from a depth of four (4) inches below the pipe to the springline of the pipe. The bedding material shall extend across the full width of the trench and shall be compacted under the haunches of the pipe.
21. Special concrete bedding shall consist of a pipe cradle constructed of Portland cement concrete containing not less than four (4) sacks of cement per cubic yard. Sand, gravel and water proportions are subject to approval by the Engineer. Maximum aggregate size shall be 1-1/2”. Maximum slump shall be 4”. The bottom of the trench shall be fully compacted before the placement of pipe cradle. The Contractor shall protect pipe against flotation and disturbing the horizontal alignment of the pipe during the pouring of the concrete. (Washington State Department of Transportation Standard Specifications for “Class A” concrete bedding will be acceptable.)
22. Clay or Controlled Density Fill (CDF) dams shall be installed across the trench and to the full depth of the granular material in all areas of steep slopes, stream crossings and wetland to prevent migration of water along the pipeline.
23. All backfill shall be placed and compacted in accordance with City, County, or State requirements as may be applicable and copies of the compaction results shall be provided to the Public Works Superintendent.

B. Manholes

1. Manholes shall be of the offset type and shall be precast concrete sections with either a cast in place base, or a precast base made from a 3,000 psi structural concrete. Joints between precast wall sections shall be confined O-ring or as otherwise specified.
2. For connections to existing systems, a concrete coring machine, suitable for this type of work, shall be utilized in making the connection. The existing manhole shall be rechanneled as required. The new pipe connection shall be plugged (water tight) until the new pipe system has been installed and approved. The Contractor shall be responsible for any existing defects in the existing manhole unless these defects are witnessed by a representative of the City prior to any work being performed to make the connection. The Contractor shall be required to remove any and all deleterious material in the existing manhole and downstream reaches as a result of his/her work.
3. The minimum diameter manhole shall be 48 inches to a depth of 20 feet, and 54 inches for a depth greater than 20 feet. The City may require an increased manhole diameter for future connections.
 - a. Manhole sections shall be placed and aligned so as to provide vertical sides and vertical alignment of the ladder steps. The completed manhole shall be rigid, true to dimension, and be water tight. Rough, uneven surfaces will not be permitted.
 - b. The mortar used between the joints in the precast sections and for laying manhole adjusting bricks shall be composed of epoxy grout. All joints and pick holes shall be wetted and completely filled with grout, smoothed both inside and outside to insure water tightness.
 - c. Masonry units (manhole adjusting brick) shall conform to the ASTM C-32, Grade MA. The outside and inside of manhole adjusting bricks and the joints of precast concrete sections shall be plastered and troweled smooth with 1/2" (minimum) of mortar in order to attain a watertight surface.
 - d. Manhole steps shall be polypropylene, Lane International Corp. No. P13938 or equal. Ladders (maximum 3 foot length) shall be polypropylene Lane International Corp. or equal, and shall be compatible with steps.
 - e. Grade Adjustment. Where work is located in public right of way, not less than 18" or more than 26" shall be provided between the top of the cone or slab and the top of the manhole frame.

- f. Channels shall be field poured and made to conform accurately to the sewer grade and shall be brought together smoothly with well rounded junctions, satisfactory to the City Inspector. The channels shall be field poured after the inlet and outlet pipes have been laid and firmly grouted into place at the proper elevation. Allowances shall be made for a one-tenth foot (0.1') drop in elevation across the manhole in the direction of flow. Channel sides shall be carried up vertically from the invert to three-quarters of the diameter of the various pipes. The concrete shelf shall be warped evenly and sloped 3/8" per foot to drain. Rough, uneven surfaces will not be permitted. Channels shall be constructed to allow the installation and use of a mechanical plug or flow meter of the appropriate size.
- g. Drop manholes shall, in all respects, be constructed as a standard manhole with the exception of the drop connection as further detailed herein.
- h. All lift holes shall be completely filled with expanding mortar, smoothed both inside and outside, to insure water tightness.
- i. All steel loops shall be removed, flush with the manhole wall. The stubs shall be covered with mortar and smoothed. Rough, uneven surfaces will not be permitted.
- j. Frames and covers shall be ductile iron. Castings shall be free of porosity, shrink cavities, cold shuts or cracks, or any surface defects which would impair serviceability. Repair of defects by welding, or by the use of "smooth-on" or similar material, will not be permitted. Frames and covers shall be machine finished or ground on seating surfaces so as to assure non-rocking fit in any position and interchangeability of covers. Frames and covers shall be provided with three bolt locking lids. Rings and covers shall be positioned so one of the three locking bolts is located over the manhole steps and shall be adjusted to conform to the final finished surface grade of the street or easement to the satisfaction of the City or agent for the City. Manhole frames and covers shall be as manufactured by "Sather" Manufacturing Company, Model No. 6024-R, or City approved equal.

C. Side Sewer Laterals

1. A side sewer lateral is considered to be that portion of a sewer line that will be constructed between a main sewer line and a property line or easement limit line.
2. All applicable specifications given herein for sewer construction shall be held to apply to side sewer laterals.
3. Side sewers shall be for a single connection only and be a minimum six inch (6") diameter pipe. Side sewers shall be connected to the tee, provided in the sewer main where such is available, utilizing approved fittings or adapters. The side sewer shall rise at a maximum of 45° and a minimum of 2%, from the sewer main.
4. Where there are no basements, the minimum side sewer depth shall be six (6) feet below existing curb line and five (5) feet below ground at the property line, except where existing improvements, proposed improvements or topography may dictate additional depth. The elevations of the side sewer connections shall be of sufficient depth to serve all existing and potential future basements.
5. The Contractor shall provide for each 6 inch side sewer service a twelve (12) foot long 2 inch x 4 inch wooden post which extends from the invert of the end of the 6 inch pipe to above the existing ground. The exposed area of this post shall be painted white and shall have selected thereon in two inch letters (black paint) "S/S" and shall also indicate the depth of the sewer service stub from finished grade.
6. Where no tee or wye is provided or available, connection shall be made by machine-made tap and saddle, only with specific written authorization of the City. The City shall review the exact location and material, list in its evaluation.
7. The maximum bend permissible at any one fitting shall not exceed forty-five degrees (45°). The maximum bend of any combination of two adjacent fittings shall not exceed 45° unless straight pipe of not less than three (3) feet in length is installed between such adjacent fittings, or unless one of the fittings is a wye branch with a cleanout provided on the straight leg.

D. Private Side Sewers

1. Private side sewers are the extension of side sewer laterals located outside of the public rights-of-way or easements granted to the City of Ilwaco.

2. Side sewer pipe located on private property shall be 4" (larger if specifically approved by the City), ductile iron or PVC ASTM D3034 pipe, and shall be installed at a 2% minimum grade (1/4 inch fall per foot). Construction on private property may be performed by owner, but requires a permit and approval by the City.
3. Pipe shall be bedded with pea gravel or clean free draining sand.
4. Six inch sewer pipe is required in the street right-of-way and shall have a 2% minimum grade. Construction in street rights-of-way shall be performed by a licensed side sewer contractor and requires a permit.
5. Side sewer shall be inspected by the City Inspector and/or Public Works Superintendent prior to backfilling. Side sewer shall be plugged and tested in the presence of the City Inspector by filling with water. Leakage rate shall not exceed 0.31 gal./hr. for 4 inch pipe and 0.47 gal./hr. for 6 inch pipe, per 100 feet of pipe.
6. On private property, minimum cover shall be 18" over top of pipe from the point, which is 30" out from house and continuing to the connection with the City's sewer system.
7. Parallel water and sewer lines shall be a minimum of 10 feet apart horizontally wherever possible and have a vertical separation of at least 18" if a vertical crossing is necessary.
8. No more than 100 feet is allowed between cleanouts. Cleanouts are required for bends equal to or greater than 45°. Cleanout shall be a watertight plugged gasketed tee or wye lateral.
9. All pipe joints shall be rubber gasket type.
10. Provide "grease trap" of a size and type approved by the City at all such locations as may be deemed necessary by the City.

E. Testing Gravity Sewers for Acceptance

1. The Contractor and/or Developer shall furnish all facilities and personnel for conducting tests under the observation of the Public Works Superintendent and/or City Inspector. Methods other than Part "B" shall be subject to the approval of the Public Works Superintendent.
2. By way of preparation for testing for leakage, the Contractor and/or Developer shall be required, prior to testing, to clean and flush all gravity sewer lines with an approved cleaning ball and clean water. The

completed gravity sewer, including side sewer stubs, after completion of backfill and cleaning shall be televised inspected. This will be permitted prior to paving.

3. The sewer shall then be tested by the low pressure air test method and/or an infiltration test but only after all utilities are installed and the project paved. Except, however, that in certain conditions an exfiltration test may be required by the Public Works Superintendent.
4. The first section of pipe not less than 300' in length installed by each crew shall be tested, in order to qualify the crew and/or the material. A successful installation of this first section shall be a prerequisite to further pipe installation by the crew. At the Contractor's option, crew and/or material qualification testing may be performed at any time during the construction process after at least two (2) feet of backfill has been placed over the pipe.
5. Before the test is performed, the pipe installation shall be cleaned. The Contractor shall furnish an inflatable diagonally ribbed rubber ball of a size that will inflate to fit snugly into the pipe to be tested. The ball may, at the option of the Contractor, be used without a tag line, or a rope or cord may be fastened to the ball to enable the Contractor to know and control its position at all times. The ball shall be placed in the last cleanout, or manhole on the pipe to be cleaned, and water shall be introduced behind it.
6. The ball shall pass through the pipe with only the pressure of the water impelling it. All debris flushed out ahead of the ball shall be removed at the first manhole where its presence is noted. In the event cemented or wedged debris or a damaged pipe shall stop the ball, the Contractor and/or Developer shall remove the obstruction, and/or repair any damaged pipe. All visible leaks showing flowing water in pipelines or manholes shall be stopped even if the test results fall within the allowable leakage. The cleaning shall be carried out in such a manner to not infiltrate existing facilities. Precautions shall be taken to prevent any damage caused by cleaning and testing. Any damage resulting shall be repaired by the Contractor and/or Developer at his own expense. The manner and time of testing shall be subject to approval of the Public Works Superintendent.
7. Deflection tests shall be performed on all PVC gravity sewer mains by pulling a mandrel through the pipe and the deflection test limit shall be 5.0 percent of the base inside diameter or for example 7.28 inches for 8-inch diameter pipe. The sewer lines shall be thoroughly cleaned prior to the deflection test.

8. The sewer pipe shall be air tested for leaks in the following manner (unless the method in paragraph 9 and 10 below is approved):
- Immediately following the pipe cleaning and televised inspection, the pipe installation shall be tested with low pressure air. Air shall be slowly supplied to the plugged pipe installation until the internal air pressure reaches 4.0 pounds per square inch greater than the average back pressure of any ground water that may submerge the pipe. At least two minutes shall be allowed for temperature stabilization before proceeding further.
 - The rate of air loss shall then be determined by measuring the time interval required for the internal pressure to decrease from 3.5 to 2.5 pounds per square inch greater than the pipe section's average adjacent groundwater back pressure.
 - The pipeline shall be considered acceptable, when tested at an average pressure of 3.0 pounds per square inch greater than the pipe section's adjacent groundwater back pressure if the total time of air loss from any section tested in its entirety between manholes, cleanouts or pipe ends does not exceed the following table:

AIR TESTING PERFORMANCE
(Test time in minutes and seconds)

Length of 8" Pipe (ft)	Length of 6" Pipe (ft)								
	0	50	100	150	200	250	300	350	400
0	0	0:40	1:20	1:58	2:38	3:18	3:58	4:38	5:16
50	1:10	1:50	2:30	3:10	3:48	4:28	5:08	5:48	5:56
100	2:20	3:00	3:40	4:20	5:00	5:38	6:14	6:12	6:08
150	3:32	4:10	4:50	5:30	6:10	6:30	6:26	6:22	6:18
200	4:42	5:22	6:00	6:40	6:44	6:38	6:34	6:30	6:26
250	5:52	6:32	6:48	6:58	6:50	6:44	6:40	6:36	6:32
300	7:02	7:20	7:10	7:02	6:56	6:50	6:44	6:40	6:36
350	7:34	7:22	7:14	7:06	7:00	6:54	6:50	6:44	6:42
400	7:34	7:24	7:16	7:08	7:02	6:58	6:52	6:48	6:44

- Test times will be provided by the Public Works Superintendent upon request for combinations other than 8-inch mains and 6-inch laterals.

- e. If the pipe installation fails to meet these requirements, the Developer and/or Contractor shall determine at his own expense the source or sources of leakage, and he shall repair (if the extent and type of repairs proposed by the Developer and/or Contractor appear reasonable to the Public Works Superintendent) or replace all defective materials or workmanship. The completed pipe installation shall meet the requirements of this low pressure air test or the alternative water exfiltration test before being considered for acceptance.
- f. Plugs used to close the sewer pipe for the air test shall be securely braced to prevent the unintentional release of a plug which can become a high velocity projectile. Gauges, air piping manifolds and valves shall be located at the top of the ground. No one shall be permitted to enter a manhole where a plugged pipe is under pressure. Air testing apparatus shall be equipped with a pressure release device such as a rupture disk or a pressure relief valve designed to relieve pressure on the pipe under test at 6 psi.

9. Exfiltration Test (if approved by City)

- a. All pipe shall be cleaned before the exfiltration test. Prior to making exfiltration leakage tests, the Developer and/or Contractor may fill the pipe with clear water to permit normal absorption into the pipe walls; provided however, that after so filling the pipe he shall complete the leakage test within twenty-four (24) hours after filling.
- b. Leakage shall be no more than 0.15 gallons per hour per inch of diameter per one hundred (100) feet of sewer pipe, with a minimum test pressure of six (6) feet of water column above the crown at the upper end of the pipe or above the active groundwater table, whichever is higher as determined by the City. The length of pipe tested shall be limited so that the pressure on the invert of the lower end of the section tested shall not exceed sixteen (16) feet of water column. For each increase in pressure of two (2) feet above a basic six (6) feet measured above the crown at the lower end of the test station, the allowable leakage shall be increased by 10 percent.
- c. The Developer and/or Contractor shall furnish all equipment, materials, and labor necessary for making test. The equipment shall be to the approval of the City Public Works Superintendent and/or City Engineer. The manner and time of testing shall be

subject to approval of the Public Works Superintendent. It shall be the Developer's and/or Contractor's responsibility to determine the level of the water table at each manhole. If leakage exceeds the allowable amount, corrective measures shall be taken and the line then be retested to the satisfaction of the City's designated inspector.

10. Infiltration Test (if approved by City)

- a. Infiltration testing shall take place during jetting of backfill, except when the natural groundwater table is above the crown of the higher end of the test section.
- b. The maximum allowable limit for infiltration shall be 0.15 gallon per hour per inch of internal diameter per 100 feet of length with no allowance for external hydrostatic head.

F. Testing Force Main

1. The Developer and/or Contractor shall conduct preliminary tests to assure the section to be tested is in an acceptable condition before requesting the City Inspector and/or Public Works Superintendent to witness the test.
2. Final testing of all force mains shall be done tested prior to acceptance of work. All pumps, gauges, plugs, saddles, corporation stops, miscellaneous hose and piping, and measuring equipment necessary for performing the test shall be furnished, installed and operated by the Contractor. Feed for the pump shall be from a barrel or other container within the actual amount of "makeup" water, so that it can be measured periodically during the test period.
3. The pipeline shall be backfilled sufficiently to prevent movement of the pipe under pressure. All thrust blocks shall be in place and time allowed for the concrete to cure before testing. Where permanent blocking is not required, the Contractor shall furnish and install temporary blocking.
4. The pipeline shall be subjected to a pressure and leakage test of a minimum of 150 pounds per square inch for a period of not less than one (1) hour. The test pressure shall be applied at the low end of the section tested.
5. The quantity of water lost from the main shall not exceed the number of gallons per hour determined by the formula:

$$L = \underline{ND(P)}^{0.5}$$

7,400

in which

L = Allowable leakage, gallons/hour

N = Number of joints in the length of pipeline tested

D = Nominal diameter of the pipe in inches

P = Average test pressure during the leakage test, psi

6. Defective materials or workmanship, discovered as a result of the tests, shall be replaced by the Contractor at the Contractor's expense. Whenever it is necessary to replace defective material or correct the workmanship, the tests shall be re-run at the Contractor's expense until a satisfactory test is obtained.
7. All fittings shall be blocked with concrete in order to prevent movement and separation of pipe joints. Timber will not be permitted as permanent blocking. Sufficient time shall be allowed for concrete to set before commencement of pressure tests. The type and size of blocks and anchors shall be in accordance with the standards set forth by the AWWA and designed by the Developer's engineer. **They shall be constructed to the minimum dimensional configuration as shown herein.** A visqueen barrier shall be provided to protect glands, bolts, and other miscellaneous materials required for this type of connection from the concrete.

6.5 VIDEO TAPING

After the gravity sewer lines have been cleaned, flushed and manhole channeled, the Developer shall provide a complete televised inspection.

The Developer shall perform a complete televised inspection of the sewer pipe and appurtenances and shall provide to the City, a DVD color audio-visual recording of the inspections together with a written log of the television inspection. The camera shall be a pan and tilt type equipped with adequate light and focusing to allow inspection of sewer main, side sewers and full circumference inspection of main line joints and fittings. The City shall determine if the quality of the televising is acceptable.

Immediately prior to the televised inspection, the Developer shall run water through each sewer line for 5- to 10-minutes to provide water for detection of any adverse grade sections visible by the presence of ponded water. The camera shall be stopped periodically at the ponded areas and the depth of water shall be measured with a ball of known diameter on the pull line. During the inspection, all tees and other fittings shall be logged as to exact location within 1 percent maximum error in measurement, wherein accuracy is checked with various fittings and the terminating manhole.

The City shall be notified 48 hours prior to any television inspection and this work shall be performed on a schedule to allow the City to witness the inspection.

Any defects in material or installation identified by the television inspection shall be repaired as required by the City at the Developer's expense.

6.6 STATE HIGHWAY CROSSINGS

All state highway and stream crossings shall be encased with a steel casing or ductile iron or PVC sleeve, as approved by the City and prevailing regulatory agencies. The welded steel casing or sleeve shall be of sufficient diameter, size and strength to enclose the sewer pipe and to withstand maximum highway or railroad loading. Sizing and wall thickness of casing is subject to approval by the Public Works Superintendent. Sand backfill or grout fill between the casing and the sewer pipe shall be required. In order to prevent the sand from being washed from the casing the ends of the casing shall be bricked and cemented after installation, backfill and testing of the pipe are completed. The ductile iron sleeve shall be completed with restrained joints within the casing.

6.7 STAKING

- A. All surveying and staking shall be performed by an engineering or surveying firm employed by the Developer and which firm shall be capable of performing such work. The engineer or surveyor directing or performing such work shall be currently licensed by the State of Washington to perform said tasks.
- B. A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
- C. The following minimum staking of sanitary sewer systems shall apply:
 - 1. Stake centerline alignment at a minimum of fifty foot intervals unless otherwise approved by the City;
 - 2. Stake location of all manholes and side sewer laterals for grade and alignment;
 - 3. Provide a copy of "cut sheets" to City inspector; and
 - 4. Stake finished manhole rim elevation and invert elevations of all pipes in manholes.

6.8 TRENCH EXCAVATION

- A. Clearing and grubbing where required shall be performed within the easement or public right-of-way as permitted by the City and/or governing agencies. Debris resulting from the clearing and grubbing shall be disposed of by the owner or contractor in accordance with the terms of all applicable permits.
- B. Trenches shall be excavated to the line and depth as shown on the City approved drawings, or as otherwise designated in the field by the City Inspector so as to provide a City approved minimum depth of cover over the pipe. See Construction Details as applicable. Except for unusual circumstances, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space as mandated by the regulatory agency and in compliance with all safety requirements of the prevailing agencies. The trench shall be kept free from water until joining is complete. Surface water shall be diverted so as not to enter the trench. The owner shall maintain sufficient pumping equipment on the job to insure that these provisions are carried out.
- C. The contractor shall perform all excavation of every description and whatever substance encountered and boulders, rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below sewer line grade. Where materials are removed from below pipe grade, the trench shall be backfilled to grade with material satisfactory to the City and thoroughly compacted.
- D. Trenching and shoring operations shall not proceed more than 100 feet in advance of pipe laying without specific written approval of the City, and shall be in conformance with Washington Industrial Safety and Health Administration (WISHA) and Office of Safety and Health Administration (OSHA) Safety Standard.
- E. The bedding course shall be constructed to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to make up the joint.

6.9 BEDDING

- A. Gravel backfill for pipe bedding shall be installed in conformance with Section 2-09 of the Standard Specifications (WSDOT).
- B. Gravel backfill for rigid pipe bedding shall consist of crushed, processed, or naturally occurring granular material. It shall be essentially free from various types of wood waste or other extraneous or objectionable materials. It shall have such characteristics of size and shape that it will compact readily and shall meet the following specifications for grading and quality:

<u>Sieve Size</u>	<u>Percent Passing*</u>
3/4" Square	100
3/8" Square	95-100
U.S. No. 8	0-10
U.S. No. 200	0-3
Sand Equivalent	35 MIN.

*All percentages are by weight.

- C. Gravel backfill for flexible pipe (P.V.C. pipe) bedding shall consist of crushed, processed, or naturally occurring granular material. It shall be essentially free from various types of wood waste or other extraneous or objectionable materials. It shall have such characteristics of size and shape that it will compact readily and shall meet the following specifications for grading and quality:

<u>Sieve Size</u>	<u>Percent Passing*</u>
3/4" Square	100
3/8" Square	95-100
U.S. No. 8	0-10
U.S. No. 200	0-3
Sand Equivalent	35 MIN.

*All percentages are by weight.

- D. Native Material shall not be used for bedding, unless approved by the Public Works Superintendent.

6.10 BACKFILLING

Backfilling and surface restoration shall closely follow installation of pipe so that not more than 100 feet is left exposed during construction hours without approval of the City. Selected backfill material shall be placed and compacted around and under the sewer pipe by hand tools. Special precautions shall be provided to protect the pipe to a point 12 inches above the crown of the pipe. The remaining backfill shall be compacted to 95 percent of the maximum density in traveled areas and road "prisms", 90 percent outside driveway, roadways, road prism, shoulders, parking or other traveled areas. Where governmental agencies other than the City have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having jurisdiction. Typically, all utility trenches located in roadway sections, roadway "prisms", or beneath traffic bearing areas shall be backfilled with 5/8-inch minus crushed rock, or other City approved structural material. Due to localized conditions, the City may allow/permit the backfill of the trench section with suitable excavated material, as determined by

the City Inspector, or if suitable native material is not available from trenching operations, the City may order the placing and compaction of gravel base conforming to Section 9-03.10 of the Standard Specifications (WSDOT) for backfilling the trench. All excess material shall be loaded and hauled to waste.

6.11 SANITARY SEWER LIFT STATIONS

- A. Lift stations and ancillary equipment shall not be constructed in City rights-of-way, unless otherwise approved by the City. The station site shall be paved and fenced and a dedicated access to the lift station provided with a minimum width of 20-feet.
- B. The Developer shall submit to the City for review and approval, complete sewage lift station plans and design which provide for the lift station, electrical service/controls and telemetry system, and auxiliary generator/transfer switch together with all accessories for a complete, automatically operating installation per Chapter 9. Odor control and/or corrosion control facilities may also be required.
- C. Design material and drawings shall provide all civil, mechanical and electrical details and align with all applicable codes and regulations, and good engineering practice. The Developer shall be required to acquire all permits and approvals for the installation/construction of this facility as required from regulatory agencies.

6.12 STREET PATCHING AND RESTORATION

See Chapter 4.15 and 4.16 for requirements regarding street patching and trench restoration.

6.13 EROSION CONTROL

- A. The detrimental effects of erosion and sedimentation shall be minimized.
 - 1. Soil shall be exposed for the shortest possible time;
 - 2. Reducing the velocity and controlling the flow of runoff;
 - 3. Detaining runoff on the site to trap sediment; and
 - 4. Releasing runoff safely to downstream areas.
- B. The Developer and/or Contractor shall provide for erosion control by conducting work in workable units; minimizing the disturbance to cover crop materials; providing mulch and/or temporary cover crops, sedimentation basins, and/or

diversions in critical areas during construction; controlling and conveying runoff; and establishing permanent vegetation and installing erosion control structures as soon as possible.

- C. Trench mulching shall be used where there is danger of backfill material being washed away due to steepness of the slope along the direction of the trench. Backfill material shall be compacted and held in place by covering the disturbed area with straw and held with a covering of jute matting or wire mesh anchored in place.
- D. Cover-Crop Seeding
 - 1. A cover crop shall be sown in all areas excavated or disturbed during construction that were not paved, landscaped and/or seeded prior to construction. Areas landscaped and/or seeded prior to construction shall be restored to their original or superior condition. Cover-crop seeding shall follow backfilling operations.
 - 2. The Developer and/or Contractor shall be responsible for protecting all areas from erosion until the cover crop affords such protection. The cover crop shall be re-seeded if required and additional measures taken to provide protection from erosion until the cover crop is capable of providing protection.
 - 3. During winter months, the Contractor may postpone seeding, if conditions are such that the seed will not germinate and grow. The Developer and/or Contractor will not, however, be relieved of the responsibility of protecting all areas until the cover crop has been sown and affords protection from erosion.
 - 4. The cover crop shall be sown at a rate of 10 to 15 pounds of seed per acre using a hand or power operated mechanical seeder capable of providing a uniform distribution of seed.

6.14 ADJUSTMENT TO GRADE

- A. All new and existing utility structures encountered on the project shall be constructed and/or adjusted to finished grade.
- B. On asphalt concrete paving projects, the manholes shall not be adjusted until the pavement is completed, at which time the center of each manhole lid shall be relocated from references previously established by the Developer and/or Contractor. The pavement shall be cut as further described and base material

removed to permit removal of the cover. The manhole shall then be brought to proper grade.

- C. Prior to commencing adjustment, a plywood and visqueen cover as approved by the City Inspector shall be placed over the manhole base and channel to protect them from debris.
- D. The asphalt concrete pavement shall be cut and removed to a neat circle, the diameter of which shall not exceed 48" or 14" from the outside diameter of the ductile iron frame, whichever is smaller. The ductile iron frame shall be brought up to desired grade, which shall conform to surrounding road surface.

- E. Adjustment to desired grade shall be made with the use of concrete or bricks. No cast or ductile iron adjustment rings will be allowed. An approved class or mortar (one part cement to two parts of plaster sand) shall be placed between manhole sections; adjustment rings or bricks and ductile iron frame to completely fill all voids and to provide a watertight seal. No rough or uneven surfaces will be permitted inside or out. Adjustment rings or brick shall be placed and aligned to provide vertical sides and vertical alignment of manhole steps and ladder.
- F. Manhole specifications for minimum and maximum manhole adjustment and step requirements will be met. Special care shall be exercised in all operations in order not to damage the manhole, frames and lids or other existing facilities.
- G. As soon as the street is paved past each manhole, the asphalt concrete mat shall be scored around the location of the manhole, catch basin, meter boxes or valve box. After rolling has been completed and the mat has cooled, it shall be cut along the scored lines. The manholes, catch basins, meter boxes and valve boxes shall then be raised to finished pavement grade and the annular spaces filled with cement concrete to within 1-1/2 inches of the finished grade. The remaining 1-1/2 inches shall be filled with asphalt concrete Class B to give a smooth finished appearance. See detail in Project Plans.
- H. After pavement is in place, all joints shall be sealed with hot asphalt cement (AR 4000W). A sand blanket shall be applied to the surface of the AR 4000W hot asphalt cement binder to help alleviate "tracking".
- I. Asphalt concrete patching shall not be carried out during wet ground conditions or when the ambient air temperature is below 50°F. Asphalt concrete mix shall be at required temperature when placed. Before making the asphalt concrete repair, the edges of the existing asphalt concrete pavement and the outer edge of the casting shall be tack coated with hot asphalt cement. The remaining 2" shall then be filled with Class B asphalt concrete and compacted with hand tampers and a patching roller.
- J. The completed patch shall match the existing paved surface for texture, density and uniformity of grade. The joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and shall be immediately covered with dry paving sand before asphalt cement solidifies. All debris such as asphalt pavement, cement bags, etc., shall be removed and disposed of by the Developer and/or his Contractor.
- K. Prior to acceptance of a project, manholes shall be cleaned of all debris and foreign material. All manhole steps and ladders shall be cleaned free of grout. Any damage occurring to the existing facilities due to the Developer's and/or Contractor's operations shall be repaired at his/her own expense.

- L. Manholes in easement areas shall be adjusted to insure drainage away from the manhole frame and cover. The manhole frame and cover shall be set approximately 0.1 foot above finished grade. Concrete collars shall be set about the structure, as detailed herein, in all non-paved areas.
- M. Adjustment of valve box castings (force main valving) shall be made in the same manner as for manholes.

6.15 FINISHING AND CLEANUP

Before acceptance of sewer system construction, all pipes, manholes, catch basins, and other appurtenances shall be cleaned of all debris and foreign material. After all other work on this project is completed and before final acceptance, the entire roadway, including the roadbed, planting, sidewalk areas, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections of a new roadway consistent with the original section.

- A. On sewer construction where all or portions of the construction is in undeveloped areas, the entire area which has been disturbed by the construction shall be shaped so that upon completion the area will present a uniform appearance, blending into the contour of the adjacent properties. All other requirements outlined previously shall be met.
- B. Slopes, sidewalk areas, planting areas and roadway shall be smoothed and finished to the required cross section and grade by means of a grading machine insofar as it is possible to do so without damaging existing improvements, trees and shrubs. Machine dressing shall be supplemented by handwork to meet requirements outlined herein, to the satisfaction of the City Inspector and/or the Public Works Superintendent.
- C. Upon completion of the cleaning and dressing, the project shall appear uniform in all respects. All graded areas shall be true to line and grade. Where the existing surface is below sidewalk and curb, the area shall be filled and dressed out to the walk. Wherever fill material is required in the planting area, the finished grade shall be elevated to allow for final settlement, but the raised surface shall present a uniform appearance.

- D. All rocks in excess of one (1) inch diameter shall be removed from the entire construction area and shall be disposed of the same as required for other waste material. In no instance shall the rock be thrown onto private property. Overhang on slopes shall be removed and slopes dressed neatly to present a uniform, natural, well-sloped surface.
- E. All excavated material at the outer lateral limits of the project shall be removed entirely. Trash of all kinds resulting from clearing and grubbing or grading operations shall be removed and not placed in areas adjacent to the project. Where machine operations have broken down brush and trees beyond the lateral limits of the project, the Developer and/or Contractor shall remove and dispose of same and restore said disturbed areas at his own expense.
- F. Drainage facilities such as inlets, catch basins, culverts, and open ditches shall be cleaned of all debris, which is the result of the Developer and/or Contractor's operations.
- G. All pavements and oil mat surfaces, whether new or old, shall be thoroughly cleaned. Existing improvements such as Portland cement concrete curbs, curb and gutters, walls, sidewalks, and other facilities, which have been sprayed by the asphalt cement, shall be cleaned to the satisfaction of the City Inspector and/or Public Works Superintendent.
- H. Castings for manholes, valves, lamp holes, vaults and other similar installations, which have been covered with the asphalt material, shall be cleaned to the satisfaction of the City.
- I. All curb and pavement markings such as, but not limited to, crosswalks, bike lanes, and handicapped symbols shall be preformed fused thermoplastic or as approved by the Public Works Superintendent.

6.16 FINAL ACCEPTANCE

- A. Prior to final inspection, all pipelines shall be flushed and cleaned and all debris removed.
- B. A pipeline "cleaning ball" of the proper diameter for each size of pipe shall be flushed through all pipelines prior to final inspection.
- C. Each sanitary sewer line shall be "videotaped" in its entirety using a remote controlled camera.
- D. Acceptable "As Built Drawings", signed, stamped and acknowledged by a licensed engineer, shall be delivered to the City.

- E. Operations and Maintenance manual, where applicable, shall be delivered to the City.

6.17 GENERAL GUARANTEE AND WARRANTY

- A. The Developer shall be required, upon completion of the work, and acceptance by the City, to furnish the City a written guarantee covering all material and workmanship for a period of three years after the date of final acceptance. The Developer shall make all necessary repairs during that period at Developer's sole expense, if such repairs are necessitated as the result of furnishing, poor materials and/or workmanship. The Developer shall obtain warranties from the contractors, subcontractors and suppliers of material or equipment where such warranties are required, and shall deliver copies to the City upon completion of the work. The existence of such warranties does not relieve the Developer from liability under Developer's guarantee.
- B. Easement documents, if applicable, shall be filed and recorded with the County Auditor's office and the documents reviewed by the City and/or its Attorney prior to project acceptance.

CHAPTER 7

WATER SYSTEM STANDARDS

7.1 GENERAL

- A. The standards established by this chapter are intended to represent the minimum standards for the design and construction of water system facilities. Greater or lesser requirements may be mandated by the City due to localized conditions. Extensions, connections or modifications to the existing system shall be in compliance with the requirements of the State Department of Health and the Department of Ecology as applicable.
- B. Off-site improvements to the existing system may be warranted based on (1) the condition and capacity of the existing water system and (2) impacts caused by the proposed development. These off-site improvements (in addition to “on-site improvements”) shall be completed as determined by the Public Works Superintendent to mitigate impacts caused by the development.
- C. All water mains shall have a capacity at least 150% of the expected maximum size required for the development.
- D. All water systems shall have telemetry satisfactory to the Public Works Superintendent on all associated lines, tanks, reservoirs, pumps, valves, and associated vaults and buildings for sampling and monitoring those items such as chlorination, turbidity, pressure, levels, flow, and status, which may be required by the Public Works Superintendent.
- E. All water booster pump stations shall be equipped with on-site auxiliary power capability sufficient to ensure the station is operable during a power outage.
- F. Every principal use and every lot within a subdivision or in any existing plat must be served by a water supply system that:
 - 1. Is adequate to accommodate the reasonable needs of the use or subdivision lot; and
 - 2. Complies with all laws of the Washington State Department of Health and all City ordinances.
- G. The following criteria must be met, unless otherwise waived by the City Engineer, before water facilities are conveyed to the City.

1. A public utility easement of adequate dimensions must be concurrently granted to the City.
2. The facilities must be inspected for conformance with the standards specified in the most current edition of the Department of Health Water System Design Manual and the facilities meet bacteriological testing.
3. The applicant has paid all required fees.
4. A maintenance bond to cover the cost of replacing or repairing the improvements and to warrant against defects in labor and material and against any damage or defects caused by construction activity on the site for a period of two years from acceptance of the improvement by the City.

7.2 DESIGN STANDARDS

- A. The design of water system improvements shall depend on their type and local site conditions. The design elements of water system improvements shall conform to the standards as set forth in this Chapter.
- B. Detailed plans which provide the locations, size, and type of the proposed water system and points of connection shall be submitted for the City's review. These plans shall be separate from sewer plans.
- C. Project plans shall have a horizontal scale of not more than 50 feet to the inch. Plans shall show:
 1. Locations of streets, right-of-ways, existing utilities, and water system facilities;
 2. Ground surface, pipe type and size, water valves, and hydrants stationing;
 3. All known existing structures, both above and below ground, which might interfere with the proposed construction, particularly sewer lines, gas mains, storm drains, telephone lines, television cables, and overhead and underground power lines; and
 4. All utility easements, and applicable County recording number(s).
 4. Computations and other data used for design of the water system shall be submitted to the City for approval.
- D. The water system facilities shall be constructed in conformance with the current version of the WSDOT/APWA Standard Specifications for Road, Bridge, & Municipal Construction and current amendments thereto, and State of Washington Department of Health Water System Design Manual, revised as to form to make reference to Local Governments and as modified by the City's requirements and standards.
- E. Material and installation specifications shall contain appropriate requirements that have been established by the industry in its technical publications, such as ASTM, AWWA, WPCF, and APWA standards. Requirements shall be set forth in the

specifications for the pipe and methods of bedding and backfilling so as not to damage the pipe or its joints.

- F. Except as otherwise noted herein, all work shall be accomplished as recommended in applicable American Water Works Association (AWWA) Standards, and according to the recommendations of the manufacturer of the material or equipment concerned.
- G. The location of the water mains, valves, hydrants, and principal fittings including modifications shall be staked by the Developer. No deviation shall be made from the required line or grade. The Contractor shall verify and protect all underground and surface utilities encountered during the progress of this work.
- H. Prior to final inspection, all pipelines shall be tested and disinfected.
- I. Before acceptance of the water system by the City, all pipes, assemblies, and other appurtenances shall be cleaned of all debris and foreign material. After all other work is completed and before final acceptance, the entire roadway, including the roadbed, planting, sidewalk areas, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections for a new roadway consistent with the original section.
- J. The Developer shall be required, upon completion of the work and prior to acceptance by the City, to furnish the City with a written guarantee covering all material and workmanship for a period of three years after the date of final acceptance and he shall make all necessary repairs during that period at his own expense, if such repairs are necessitated as the result of furnishing poor materials and/or workmanship. The Developer shall obtain warranties from the contractors, subcontractors and suppliers of material or equipment where such warranties are required and shall deliver copies to the City upon completion of the work.

7.3 GENERAL REQUIREMENTS

- A. Prior to construction, the Contractor shall schedule a pre-construction meeting with the Public Works Superintendent, stakeholders, and all other interested parties.
- B. Work shall be performed only by contractors experienced in laying public water mains.

- C. Prior to any work being performed, the Contractor shall contact the Public Works Superintendent to set forth his proposed work schedule.
- D. Contractor shall obtain approval of materials to be used from the Public Works Superintendent prior to ordering of materials.
- E. Water mains shall be laid only in dedicated street, rights-of-ways or easements shown on preliminary plats or which have been granted to the City. A street is normally not considered dedicated until the plat which created it has been officially filed with the County Auditor.
- F. All water main distribution pipeline construction shall have a minimum 36" cover from finished grade and 42-inch cover over transmission mains (Standard Detail W-D1). Mains shall generally be located parallel to and 10 feet northerly or easterly of street centerline. Water mains shall be extended to the far property line(s) of the property being served. Off-site extensions may be required to hydraulically loop existing and new systems. Oversizing of water mains may be required to be installed per City's current Water System Plan.
- G. Minimum distance between sewer and water lines shall be 10 feet horizontally and 1 foot vertically. Refer to Standard Detail W-D17 for requirements regarding utility separation and crossing.
- H. Water main pie and service connections shall be a minimum of 10 feet away from building foundations and/or roof lines.
- I. Air relief valves are required at high points in water lines. Air relief valves shall be installed in accordance with Standard Detail W-D4 or Standard Detail W-D5.
- J. Fire hydrants are generally required approximately every 600 feet in residential areas, and every 300 feet in commercial areas. However, fire hydrants shall be furnished and installed at all locations as specifically mandated by the local fire marshall and/or per City Building Code. Refer to Standard Detail W-D2 and Standard Detail W-D3 for information regarding fire hydrant installation.
- K. Fire hydrants on dead end streets and roads shall be located within approximately 300 feet from the frontage center of the farthest lot. Distances required herein shall be measured linearly along street or road.
- L. Pipes connecting hydrants to mains shall be at least 6 inch in diameter and be less than 17 feet in length.
- M. Dead end lines are not permitted except where the Developer can demonstrate to the City's satisfaction that it would be impractical to extend the line at a future date. Water mains on platted cul-de-sacs shall extend to the plat line beyond the

cul-de-sac to neighboring property for a convenient future connection, and extended off-site to create a hydraulic loop, or, as minimum, have a four (4") inch blow off assembly installed at the termination point (Standard Detail W-D7).

- N. All materials shall be new and undamaged.
- O. Unless otherwise approved or required by the Public Works Superintendent, the water main shall be HDPE or C-900 PVC. Ductile iron pipe may be appropriate in special circumstances and must receive specific approval from the Public Works Superintendent. The minimum nominal size for water mains shall be 8 inches, unless otherwise approved/required by City.

EXCEPTION: 6-inch hydrant spools and pipelines located beneath rock or retaining walls shall be Class 53 ductile iron.
- P. Fittings shall be compatible with HDPE, C-900 PVC, and ductile iron as appropriate. Ductile iron fittings shall be cement-lined.
- Q. Provide bends in field to suit construction and in accordance with pipe manufacturer's recommendations so as not to exceed allowable deflection at pipe joints.
- R. Provide thrust blocking and/or restrained joints at all fittings and bends in accordance with the City standards and conditions (Standard Detail W-D10 and Standard Detail W-D12). Blocking is to be designed by Developer's Engineer.
- S. Provide anchor blocking at all up-thrust vertical bends in accordance with City standards (Standard Detail W-D11). Blocking is to be designed by Developer's Engineer.
- T. Water valves shall be located in clusters when possible and shall be located so that each leg of the main line system can be isolated separately.
- U. All water valve marker posts shall be painted yellow and marked with the distance to valve being referenced (Standard Detail W-D4, Standard Detail W-D5).
- V. Residential water service pipe shall be one-inch diameter copper or PE pipe (no joints beneath pavement areas), meeting or exceed ASTM D2239, SDR-7 as manufactured by Driscopipe (CL 200), or City approved equal (Standard Detail ____).

- W. Minimum size service lines between the water main and the water meter shall be 1 inch unless otherwise specified (W-D8). All service lines shall be the minimum size otherwise specified by the Uniform Plumbing Code in accordance with fixture units, unless otherwise specified.
- X. Meter services and meter boxes shall be set to final grade and all adjustments shall be made prior to final pressure testing of the system, centerline of service inlets shall be located to match bottom elevation of meter box in such a manner that meter inlet and outlet will be the same elevation as bottom of meter box. Refer to Standard Detail W-D8 for required materials and installation information for water services 2" and smaller. Refer to Standard Detail W-D9 for required materials and installation information for water services 3" and larger.
- Y. All water services shall end within road right-of-way or easements.
- Z. All meters shall be installed by the City, and the Developer shall pay the current meter installation charge.
- AA. All meters shall be compatible with the radio-read meter system used by the City.
- BB. Contractor shall install water sampling stations per Figure W-D21. Contractor shall furnish the location of water sample stations to City Utilities Department. One station is required for development in size of 1 to 10 lots. One additional station is required for each additional 50 lots or portions thereof.
- CC. All new buildings and residences shall include in their water service a suitable pressure reducing valve to protect the plumbing from excessive pressures, unless waived on the application form of the City. Refer to Standard Detail W-D24 for installation requirements for pressure reducing stations.
- DD. All new construction shall comply with the "Accepted Procedure and Practice in Cross Connection Control Manual" as published by the Pacific Northwest Section of the American Water Works Committee", November 1995, Sixth Edition, and current amendments thereto. A copy of such is available for review at the City office. Where required, backflow and cross-control devices will be installed.
- EE. Cut in connections shall not be made on Fridays, holidays or weekends. All tapping sleeves and tapping valves shall be pressure tested prior to making connection to existing mains.
- FF. Contractor shall notify the Public Works Superintendent and obtain approval from him prior to any water shut-off or turn-on, affecting the water system, a minimum of 48 hours in advance.
- GG. Biological test samples will be taken by the City and paid for by the contractor.

- HH. All water mains and appurtenances shall be hydrostatically tested at 200 psi in accordance with City Standards.
- II. Resilient seated wedge gate valves shall be used for 10-inch mains and smaller. Butterfly valves shall be used for mains greater than 10 inches.
- JJ. Road restoration shall be in accordance with City, County and State design and construction standards, as may be applicable. Developer and Contractor shall become familiar with all City, County and State conditions of required permits, and shall adhere to all conditions and requirements.

7.4 MATERIALS

A. Water Mains & Fittings

- 1. Water mains to be installed shall be HDPE or if approved by the Public Works Superintendent, C-900 PVC. Under special circumstances the Public Works Superintendent may approve the limited use of ductile iron of an appropriate class.

B. HDPE Pipe and Fittings

- 1. HDPE pipe for water mains shall be manufactured from PE 3408.3608 resin conforming to ASTM D3350. 4" and greater pipe shall be IPS/DIPS, DR9 conforming to ASTM F714, AWWA C906, NSF. ½" through 3" pipe shall be IPS, DR9, conforming to D3035, AWWA C901, NFS.
- 2. All HDPE molded fittings and fabricated fittings shall be fully pressure rated to match the pipe DR pressure rating to which they are made. All fittings shall be molded or fabricated by the manufacturer. No Contractor fabricated fittings shall be used unless approved by the City.
- 3. The manufacture of the HDPE pipe shall supply all HDPE fittings and accessories as well as any adapters and/or specials required to perform the work.
- 4. All fittings shall be installed using butt-fused fittings, thermo-fused fittings/couplings, or flanged adapters and must be approved by the City.
- 5. All transition from HDPE pipe to ductile iron or PVC shall be made per the approval of the City and per the HDPE pipe manufacturer's recommendations and specifications. A molded flange connector adapter within a carbon steel back-up ring assembly shall be used for pie type

transitions. Ductile iron back-up rings shall mate with cast iron flanges per ANSI B16.1. A 316 stainless steel back-up ring shall mate with a 316 stainless steel flange per ANSI B16.1.

C. PVC Pipe and Fittings

1. PVC pipe for water mains shall C-900 be made from material conforming to ASTM C1784. The pipe shall be DR 18 and conform to ANSI/AWWA C900 specification, with gaskets meeting ASTM F477 and joints in compliance with ASTM D3139. Pipe joints shall be gasketed. Solvent-cement joints are not acceptable.
2. PVC Schedule 80 fittings shall conform to ASTM D 2467. PVC Schedule 80 threaded fittings shall conform to ASTM D 2464. Pipe and fittings shall be manufactured as a system and be the product of one manufacturer. Pipe and fittings shall conform to National Sanitation Foundation (NSF) Standard 61 or the health effects portion of NSF Standard 14.

D. Ductile Iron Pipe and Fittings:

1. If approved, ductile iron pipe shall conform to ANSI/AWWA C151/A21.51-91 Standards, and current amendments thereto, except the ductile iron pipe shall be thickness Class 52 for 4" through 14" diameter pipe (except for 6-inch hydrant spools which shall be Cl. 53) and Class 50 for 16" and larger. Grade of iron shall be a minimum of 60-42-10. The pipe shall be cement lined to a minimum thickness of 1/16", and the exterior shall be coated with an asphaltic coating. Each length shall be plainly marked with the manufacturer's identification, year case, thickness, class of pipe and weight.
2. If approved, ductile iron joints shall be mechanical joint or push-on type, employing a single gasket, such as "Tyton", except where otherwise calling for flanged ends. Bolts furnished for mechanical joint pipe and fittings shall be high strength ductile iron, with a minimum tensile strength of 50,000 psi.
3. If approved, restrained ductile iron joint pipe, where shown on the plans shall be push-on joint pipe with "Fast Tight" gaskets as furnished by U.S. Pipe or equal for 12" diameter and smaller pipe and "TR FLEX" as furnished by U.S. Pipe or equal for 16" and 24" diameter pipes. The restrained joint pipe shall meet all other requirements of the non-restrained pipe.

4. All ductile iron fittings shall be short-bodied and comply with applicable ANSI/AWWA C110 or C153 Standards for 350 psi pressure rating for mechanical joint fittings and 250 psi pressure rating for flanged fittings. All fittings shall be lined and either mechanical joint or flanged, as indicated on the plans.
- E. All pipe shall be jointed by the manufacturer's standard coupling, be all of one manufacturer, and be carefully installed in complete compliance with the manufacturer's recommendations.
- F. Joints shall be "made up" in accordance with the manufacturer's recommendations. Standard joint materials, including rubber ring gaskets, shall be furnished with the pipe. Material shall be suitable for the specified pipe size and pressures.
- G. Fittings in areas shown on the plans for restrained joints shall be mechanical joint fittings with a mechanical joint restraint device. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be City approved.
- H. The pipe and fittings shall be inspected for defects and prepped prior to installation. HDPE and PVC piping shall be wiped clean. If ductile iron has been approved, all lumps, blisters and excess coal tar coating shall be removed from the bell and spigot end of each pipe, and the outside of the spigot and the inside of the bell shall be wire-brushed and wiped clean and dry, and free from oil and grease before the pipe is laid.
- I. Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. After placing a length of pipe in the trench, the spigot end shall be centered in the bell and pipe forced home and brought to correct line and grade. The pipe shall be secured in place with select backfill tamped under it. Precaution shall be taken to prevent dirt from entering the joint space. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a water-tight plug. If water is in the trench when work resumes, the seal shall remain in place until the trench is pumped completely dry. No pipe shall be laid in water or when trench conditions are unsuitable.

- J. The cutting of pipe for inserting fittings or closure pieces shall be done in a neat and workmanlike manner, without damage to the pipe or lining, and so as to leave a smooth end at right angles to the axis of the pipe. Pipe shall be laid with bell ends facing in the direction of the laying, unless directed otherwise by the City. Wherever it is necessary to deflect pipe from a straight line, the amount of deflection allowed shall not exceed pipe manufacturer's recommendations.
- K. For connection of mechanical joints, the socket, plain end of each pipe and gasket shall be cleaned of dirt before jointing, and shall be jointed according to manufacturer's directions. Bolts shall be tightened alternately at top, bottom and sides, so pressure on gasket is even.
- L. For connection of "Tyton" joints, the jointing shall be done according to manufacturer's recommendations, with special care used in cleaning gasket seat to prevent any dirt or sand from getting between the gasket and pipe. Lubricant to be used on the gasket shall be non-toxic and free from contamination. When a pipe length is cut, the outer edge of the cut shall be beveled with a file to prevent injury to the gasket during jointing.
- M. Valves, fittings, plugs and caps shall be set and jointed to pipe in the manner as required. All dead ends on new mains shall be closed with dead end M.J. caps and thrust blocks.
- N. Fittings shall be "blocked" with poured-in-place concrete, with a firm minimum bearing against an undisturbed earth wall per Standard Detail W-D10 or Standard Detail W-D12. Thrust blocks shall be poured as soon as possible after setting the fittings in place to allow the concrete to "set" before applying the pressure test. The concrete thrust blocks shall be in place before beginning the pressure test. Anchor blocks shall be allowed to set sufficiently to develop the necessary bond strength between the reinforcing rods and the concrete anchor before beginning the pressure test.
- O. All of the new piping, valves and blocking shall have been installed, disinfected and tested up to the point of cutting into existing lines before the crossover is made. The crossover to the existing system shall be in full readiness, including the cut and sized specials. Forty-eight (48) hour notice shall be given the City in advance of the planned "cut-ins".
- P. Valves
 - 1. All valves larger than 10" shall generally be furnished and installed as butterfly valves. All valves 10" and smaller shall generally be furnished and installed as resilient seat gate valves.

Q. Resilient-Seated Gate Valves.

1. All gate valves shall conform to ANSI/AWWA C509-87 Standards for resilient-seated, high strength, bronze stemmed gate valves. The valves shall be iron-bodied, iron disk completely encapsulated with polyurethane rubber and bronze, non-rising stem with "O" ring seals. The polyurethane sealing rubber shall be fusion bonded to the wedge to meet ASTM tests for rubber to metal bond ASTM D429. The valves shall open counter-clockwise and be furnished with 2-inch square operating nuts except valves in vaults shall be furnished with handwheels. All surfaces, interior and exterior shall be fusion bonded epoxy coated, acceptable for potable water.
2. For applications with working pressure above 175 psi, a ductile iron valve rated as 250 psi or higher shall be used.
3. The valves shall be set with stems vertical. The axis of the valve box shall be common with the axis projected off the valve stem. The tops of the adjustable valve boxes shall be set to the existing or established grade, whichever is applicable.
4. Valves shall be Dresser, M&H, Waterous, or Mueller.

R. Butterfly Valves.

1. Butterfly valves shall be ductile iron body of the tight closing rubber seat type with rubber seat either bonded to the body or mechanically retained in the body with no fasteners or retaining hardware in the flowstream. The valves shall meet the full requirements of AWWA C504, Class 150B except the valves shall be able to withstand 200 psi differential pressure without leakage. The valves may have rubber seats mechanically affixed to the valve vane. Where threaded fasteners are used, the fasteners shall be retained with a locking wire or equivalent provision to prevent loosening. Rubber seats attached to the valve vane shall be equipped with stainless steel seat ring integral with the body, and the body internal surfaces shall be epoxy coated to prevent tuberculations buildup, which might damage the disc-mounted rubber seat.
2. No metal-to-metal sealing surfaces shall be permitted. The valves shall be bubble-tight at rated pressures with flow in either direction, and shall be satisfactory for applications involving valve operations after long periods of inactivity. Valve discs shall rotate ninety (90) degrees from the full open position to the tight shut position. The valve shall be Henry Pratt Company "*Groundhog*", or owner approved equal.

S. Tapping Sleeves & Tapping Valves

1. Connections to existing water mains typically shall be wet taps through a tapping tee and tapping valve and shall be made by a city approved contractor. The tapping sleeves shall be rated for a working pressure of 250 psi minimum and furnished complete with joint accessories. Refer to Standard Detail W-D6 for detailed information regarding tapping sleeves.
2. Size-on-size tapping sleeves shall be stainless steel. Stainless steel sleeves only shall be used on AC pipe. Ductile iron tapping tees shall be allowed if tap is at least 2" smaller in diameter than the existing water main.
3. Cut in connections shall not be made on Fridays, holidays or weekends.
4. All tapping sleeves and tapping valves shall be pressure tested to a minimum of 200 psi prior to making connection to existing mains.

T. Pressure Reducing and Relief Valves.

1. Pressure reducing valves in the water service pipe are required when street main pressure exceeds 80 psi, as follows:
2. When street main pressure exceeds 80 psi, an approved pressure reducing valve with an approved pressure relief device shall be installed in the water service pipe near its entrance to the building to reduce the pressure to 80 psi or lower, except where the water service pipe supplies water directly to a water-pressure boost system, an elevated water gravity tank, or to pumps provided in connection with a hydro pneumatic or elevated gravity water-supply tank system. Pressure at any fixture shall be limited to no more than 80 psi under no-flow conditions. Refer to Standard Detail WD-24 – Pressure Reducing Stations.

U. All Valves

1. All valves with operating nuts located more than 42" below finished grade shall be equipped with extension stems to bring the operating nut to within 18" of the finished grade. Cast iron or PVC adjustable valve boxes shall be provided for all valves.
2. At the top of the extension stem, there shall be a two-inch (2") standard operating nut, complete with a centering flange that closely fits the five-inch (5") pipe encasement of the extension stem. The valve box shall be

set in a telescoping fashion around the five-inch (5") pipe cut to the correct length to allow future adjustment up or down.

V. Fire Hydrants

1. All fire hydrants shall be Mueller Super Centurion – 250, Model A-421 in conformance with AWWA Standard Specification C-502. Each hydrant shall be equipped with one (1) 4-1/2" and two (2) 2-1/2" hose ports with permanent Storz hydrant adaptor and Storz blind cap. Refer to Standard Detail W-D2 for fire hydrant details.
2. The hydrant shall be prime coated with Steelcote SR53 Heavy Duty brush type enamel. Top coat shall be two coats of Sherwin/Williams blue industrial enamel (#B54W101) or Krylon Industrial Rust Tough blue enamel.
3. A blue reflective pavement marker shall be furnished and installed 6 to 12 inches off center on the hydrant side of the road adjacent to the hydrant.
4. The holding spools between the gate valve and fire hydrant shall be made from six-inch (6") Class 52 ductile iron pipe, 3 foot minimum length and 17 foot maximum length without restrained joints.

W. Blow-offs & Air Relief Assemblies

1. Two (2") or Four (4") inch blowoff assemblies shall be installed at the terminus of all dead end water mains (Standard Detail W-D7). Blowoffs utilized by the Contractor for flushing the water main shall be sufficient size to obtain 2.5 feet per second velocity in the main. Temporary blow-offs shall be removed and replaced with a suitably sized watertight brass plug.
2. Two (2") inch air and vacuum release valves shall be installed at principal high points in the system (Standard Detail W-D4 and Standard Detail W-D5).
3. The installation of these items shall include connection piping, gate valve, valve box, and all accessories. Valve markers shall be installed.

X. Water Sampling Station

1. One water sampling station shall be provided to the City for each development in size of 1 to 10 lots. One additional sampling station shall be provided for each additional 50 lots or portion thereof. The water

sampling station shall be furnished and installed at a location as determined by the Public Works Superintendent and as further shown in Standard Detail W-D21.

7.5 WATER PIPE TESTING & DISINFECTING

- A. A water hydrant meter shall be required and procured from the City for all water utilized for flushing pipelines. All pumps, gauges, plugs, saddles, corporation stops, miscellaneous hose and piping, and measuring equipment necessary for performing the test shall be furnished, installed and operated by the Contractor.
- B. Feed for the pump shall be from a barrel or other container within the actual amount of "makeup" water, so that it can be measured periodically during the test period.
- C. The pipeline shall be backfilled sufficiently to prevent movement of the pipe under pressure. All thrust blocks shall be in place and time allowed for the concrete to cure before testing. Where permanent blocking is not required, the Contractor shall furnish and install temporary blocking.
- D. As soon as pipe is secured against movement under pressure, it may be filled with water. Satisfactory performance of all valves shall be checked while the line is filling.
- E. Contractor shall preflush all water mains after water has remained in the main for 24 hours and before pressure testing the main.
- F. After the pipe is filled and all air expelled, it shall be pumped to a test pressure of 250 psi, and this pressure shall be maintained for a period of not less than thirty (30) minutes to insure the integrity of the thrust and anchor blocks. **The contractor/developer is cautioned regarding pressure limitations on butterfly valves.** All tests shall be made with the hydrant auxiliary gate valves open and pressure against the hydrant valve. Hydrostatic tests shall be performed on every complete section of water main between two valves, and each valve shall withstand the same test pressure as the pipe with no pressure active in the section of pipe beyond the closed valve.
- G. In addition to the hydrostatic pressure test, a leakage test shall be conducted on the pipeline. The leakage test shall be conducted at 150 psi for a period of not less than one (1) hour. The quantity of water lost from the main shall not exceed the number of gallons per hour determined by the formula:

$$L = \underline{ND(P)}^{0.5}$$

7,400

in which

L = Allowable leakage, gallons/hour
N = Number of joints in the length of pipeline tested
D = Nominal diameter of the pipe in inches
P = Average test pressure during the leakage test, psi

- H. Defective materials or workmanship, discovered as a result of the tests, shall be replaced by the Contractor at the Contractor's expense. Whenever it is necessary to replace defective material or correct the workmanship, the tests shall be re-run at the Contractor's expense until a satisfactory test is obtained.
- I. As sections of pipe are constructed and before pipelines are placed in service, they shall be sterilized in conformance with the requirements of the State of Washington Department of Health Services.
- J. The Contractor shall be responsible for flushing all water mains prior to water samples being acquired. The water mains shall be flushed at a rate to provide a minimum 2.5 feet per second velocity in the main.
- K. In all disinfection processes, the Contractor shall take particular care in flushing and wasting the chlorinated water from the mains to assure that the flushed and chlorinated water does no physical or environmental damage to property, streams, storm sewers or any waterways. The Contractor shall chemically or otherwise treat the chlorinated water to prevent damage to the affected environment, particularly aquatic and fish life of receiving streams.
- L. Chlorine shall be applied in one of the following manners, listed in order of preference, to secure a concentration in the pipe of at least 50 ppm.
 - 1. Injection of chlorine-water mixture from chlorinating apparatus through corporation cock at beginning of section after pipe has been filled, and with water exhausting at end of section at a rate controlled to produce the desired chlorine concentration;
 - 2. Injection similarly of a hypochlorite solution;
 - 3. Other City pre-approved method(s) selected by the Developer and/or Contractor.
 - 4. After the desired chlorine concentration has been obtained throughout the section of line, the water in the line shall be left standing for a period of twenty-four (24) hours. Following this, the line shall be thoroughly flushed

and a water sample collected. The line shall not be placed in service until a satisfactory bacteriological report has been received.

- M. Only City employees only will be allowed to operate existing and new tie-in valves. The Contractor, his subcontractors, and their respective employees are expressly forbidden to operate any valve on any section of line which has been accepted by the City.

7.6 BACKFLOW PREVENTION AND SPRINKLER SYSTEMS

- A. All water systems connected to the public water system shall have backflow prevention as required by WAC 248-54-285. Refer to Standard Detail W—D22 regarding Reduced Pressure Backflow Assembly ¾” to 2” and Standard Detail W-D23 regarding Reduced Pressure Backflow Assembly 3” and Larger.
- B. Fire sprinkler systems as mandated, proposed, or required by the local Fire Marshal and/or City Ordinance that have a fire department connection shall have backflow prevention as required by WAC 248-54-285. Refer to Standard Detail W-D15 regarding Fire Line Connection and Standard Detail W-D16 regarding Fire Line Riser Details.
- C. Building sprinkler systems may be required based on Building Codes and Fire Marshall requirements.

7.7 STAKING

- A. All surveying and staking shall be performed by an engineering or surveying firm employed by the Developer and capable of performing such work. The engineer or surveyor directing and/or performing such work shall be currently licensed by the State of Washington to perform said tasks.
- B. A preconstruction meeting shall be held with the Public Works Superintendent prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
- C. The minimum staking of water systems shall be as follows:
 - 1. Provide staking sufficient to satisfy Public Works Superintendent. In new plat development roadway centerline staking must be readily identifiable; and
 - 2. Stake locations of all proposed fire hydrant, blow-off, air-vac, valves, meters, etc.

7.8 TRENCH EXCAVATION

- A. Clearing and grubbing where required shall be performed within the easement or public right-of-way as permitted by the City and/or governing agencies. Debris resulting from the clearing and grubbing shall be disposed of by the owner or contractor in accordance with the terms of all applicable permits.
- B. Trenches shall be excavated to the line and depth designated by the City to provide a minimum of 36 inches of cover over the pipe. Except for unusual circumstances where approved by the City, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space as allowed by the governing agency and in compliance with all safety requirements of the prevailing agencies. See Standard Detail W-D1. The trench shall be kept free from water until joining is complete. Surface water shall be diverted so as not to enter the trench. The owner shall maintain sufficient pumping equipment on the job to insure that these provisions are carried out.
- C. The contractor shall perform all excavation of every description and whatever substance encountered and boulders, rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below the pipeline grade. Where materials are removed from below the pipeline grade, the trench shall be backfilled to grade with material satisfactory to the City and thoroughly compacted.
- D. Trenching and shoring operations shall not proceed more than 100 feet in advance of pipe laying without approval of the City, and shall be in conformance with Washington Industrial Safety and Health Administration (WISHA) and Office of Safety and Health Administration (OSHA) Safety Standard.
- E. The bedding course shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to make up the joint.

7.9 BACKFILLING

- A. Backfilling and surface restoration shall closely follow installation of pipe. The City, based on the location of construction, shall designate the amount of trenching which may be left exposed. In no case shall more than 100 feet be left exposed during construction hours without approval of the Public Works Superintendent.
- B. Selected material shall be placed and compacted around and under the storm drain by hand tools. Special precautions should be provided to protect the pipe to a point 12 inches above the crown of the pipe. The remaining backfill shall be

compacted to 95 percent of the maximum density in traveled areas and road prisms, 90 percent outside driveway, roadways, road prism, shoulders, parking or other traveled areas. Where governmental agencies other than the City have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having jurisdiction. Typically, all trenches located in roadway sections, roadway "prisms", and in traffic bearing areas shall be required to be backfilled and compacted with 5/8-inch minus crushed rock.

- C. Due to local conditions, as may be specifically approved by the Public Works Superintendent, suitable excavated backfill material or sand, as determined by the Public Works Superintendent, may be utilized as backfill, or if such material is not available from trenching operations, the Public Works Superintendent may order the placing of CDF or gravel base conforming with Section 9-03.10 of the Standard Specifications (WSDOT) as appropriate for backfilling the trench. All excess material shall be promptly loaded and hauled to waste.

7.10 STREET PATCHING AND RESTORATION

- A. See Chapter 4 and Standard Details for requirements regarding street patching and trench restoration.

7.11 EROSION CONTROL

- A. The detrimental effects of erosion and sedimentation shall be minimized by conforming to the following general principles:
 - 1. Soil shall be exposed for the shortest possible time;
 - 2. Reducing the velocity and controlling the flow of runoff;
 - 3. Detaining runoff on the site to trap sediment; and
 - 4. Releasing runoff safely to downstream areas.
- B. In applying these principles, the Developer and/or Contractor shall provide for erosion control by conducting work in workable units; minimizing the disturbance to cover crop materials; providing mulch and/or temporary cover crops, sedimentation basins, and/or diversions in critical areas during construction; controlling and conveying runoff; and establishing permanent vegetation and installing erosion control structures as soon as possible.
- C. Trench mulching will be required where there is danger of backfill material being washed away due to steepness of the slope along the direction of the trench, backfill material shall be compacted and held in place by covering the disturbed

area with straw and held with a covering of jute matting or wire mesh anchored in place.

D. Cover Crop Seeding.

1. A cover crop shall be sown in all areas excavated or disturbed during construction that were not paved, landscaped and/or seeded prior to construction. Areas landscaped and/or seeded prior to construction shall be restored to their original or superior condition.
2. Contact the City Clerk for water charges if use of City water is contemplated and the Public Works Superintendent for use of a hydrant for water in furtherance of seeding.
3. Hydrants shall only be opened and closed by members of the City crew.
4. Cover-crop seeding shall follow backfilling operations. The Developer and/or Contractor shall be responsible for protecting all areas from erosion until the cover crop affords such protection.
5. The cover crop shall be re-seeded if required and additional measures taken to provide protection from erosion until the cover crop is capable of providing protection.
6. During winter months, the Contractor may postpone seeding, if conditions are such that the seed will not germinate and grow. The Developer and/or Contractor will not, however, be relieved of the responsibility of protecting all areas until the cover crop has been sown and affords protection from erosion.
7. The cover crop shall be sown at a rate of 10 to 15 pounds of seed per acre using a hand or power operated mechanical seeder capable of providing a uniform distribution of seed.

7.12 FINISHING AND CLEANUP

- A. After all other work on this project is completed and before final acceptance, the entire roadway, including the roadbed, planting, sidewalk areas, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections of a new roadway consistent with the original section, and as hereinafter specified.
- B. On water system construction where all or portions of the construction is in undeveloped areas, the entire area which has been disturbed by the construction shall be shaped so that upon completion the area will present a uniform

appearance, blending into the contour of the adjacent properties. All other requirements outlined previously shall be met. All pipes, valves, tanks, reservoirs, boost pumps, boost pump stations and building associated therewith shall be cleaned of all debris and foreign material.

- C. Slopes, sidewalk areas, planting areas and roadway shall be smoothed and finished to the required cross section and grade by means of a grading machine insofar as it is possible to do so without damaging existing improvements, trees and shrubs. Machine dressing shall be supplemented by hand work to meet requirements outlined herein, to the satisfaction of the City Inspector and/or the Public Works Superintendent.
- D. Upon completion of the cleaning and dressing, the project shall appear uniform in all respects. All graded areas shall be true to line and grade. Where the existing surface is below sidewalk and curb, the area shall be filled and dressed out to the walk. Wherever fill material is required in the planting area, the finished grade shall be elevated to allow for final settlement, but nevertheless, the raised surface shall present a uniform appearance.
- E. All rocks in excess of one (1) inch diameter shall be removed from the entire construction area and shall be disposed of the same as required for other waste material. In no instance shall the rock be thrown onto private property. Overhang on slopes shall be removed and slopes dressed neatly so as to present a uniform, natural, well-sloped surface.
- F. All excavated material at the outer lateral limits of the project shall be removed entirely. Trash of all kinds resulting from clearing and grubbing or grading operations shall be removed and not placed in areas adjacent to the project. Where machine operations have broken down brush and trees beyond the lateral limits of the project, the Developer and/or Contractor shall remove and dispose of same and restore said disturbed areas at his own expense.
- G. Drainage facilities such as inlets, catch basins, culverts, and open ditches shall be cleaned of all debris, which is the result of the Developer and/or Contractor's operations.
- H. All pavements and oil mat surfaces, whether new or old, shall be thoroughly cleaned. Existing improvements such as Portland cement concrete curbs, curb and gutters, walls, sidewalks, and other facilities, which have been sprayed by the asphalt cement, shall be cleaned and re-painted where needed, all to the satisfaction of the Public Works Superintendent.

- I. Castings for monuments, water valves, vaults and other similar installations which have been covered with the asphalt material shall be cleaned to the satisfaction of the Public Works Superintendent.

7.13 GENERAL GUARANTEE AND WARRANTY

- A. The Developer shall be required, upon completion of the work and prior to acceptance by the City, to furnish the City a written guarantee covering all material and workmanship for a period of two years after the date of final acceptance and he shall make all necessary repairs during that period at his own expense, if such repairs are necessitated as the result of furnishing poor materials and/or workmanship.
- B. The Developer shall obtain warranties from the contractors, subcontractors and suppliers of material or equipment where such warranties are required, and shall deliver copies to the City upon completion of the work. Delivery of such warranties to the City shall not relieve the Developer of liability under his guarantee.
- C. Easement documents, if applicable, shall be filed and recorded with the County Auditor's office and the documents reviewed by the City prior to project acceptance.

Chapter 8

SEWAGE LIFT STATIONS

8.1. OBJECTIVE

This chapter is intended to present information and provide an outline of the minimum general standards to be accomplished in planning a sewage lift station or grinder pump installation within the City of Ilwaco service area.

The Developer shall submit to the City for review and approval, complete sewage lift station or grinder pump plans and design which provide for the lift station, electrical service, SCADA controls, and auxiliary generator/transfer switch together with all accessories for a complete, automatically operating installation. The City, at its option, may direct the City's Engineer to prepare a feasibility study, at the Developer's expense and under a separate agreement with the Developer, prior to granting conceptual approval for the use of a lift station. This feasibility study will address specific design and planning issues identified by the City as necessary for evaluation of the proposal.

The grinder pump standards contained herein are intended to apply to a typical residential grinder pump station and to express the City's general policy with regard to standardization of grinder pump station design and operation. The grinder pump standards are supplemental to the general standards for sanitary sewer systems presented in Chapter 6 of these standards.

The lift station standards contained herein are intended to apply to a typical duplex sewage lift station within the typical size range for developer-constructed stations and to express the City's general policy with regard to standardization of lift station design and operation. At the City's discretion, stations with non-typical service requirements, such as high flows, high head pressures, flow monitoring, multiple pump operation, critical service or unusual site constraints, may be subject to additional or alternative design requirements.

The lift station standards are supplemental to the general standards for sanitary sewer systems presented in Chapter 6 of these standards.

Due to the inherent complexity of lift station design, and the associated health and safety risks, the lift station design shall be prepared by a professional engineer registered in the State of Washington and with demonstrable experience in lift station design. At the request of the City, the Developer shall provide a resume for the proposed lift station designer, listing similar projects designed by that individual, with references and phone numbers. After the lift station design is complete and has been approved by the City, the design engineer shall remain responsible for the preparation of all design documents, including the design report, plans, specifications and permit submittals. The design

engineer shall also be responsible for construction management-related engineering duties, including the coordination of submittals and shop drawings for City review, and the preparation of field change requests, record drawings, control description, and maintenance and operation materials. Engineering responsibilities shall not be reassigned by the Developer without the City's approval.

Design material and drawings shall provide all civil, mechanical and electrical details and align with all applicable codes and regulations, and good engineering practice.

8.2 GRINDER PUMP STATION

The minimum requirements for a residential sewage pumping system connecting a single residence to the City's system are specified as follows. The City accepts no responsibility for the design, operation and maintenance of such privately owned and operated systems.

- A. All equipment and accessories shall be standard manufactured items and those coming in contact with sewage shall be specifically manufactured for sewage use.
- B. Lift station must be located outside the building. If the station is completely buried, install 48" I.D. manhole with frame and cover over station for access.
- C. The pump shall be a custom designed, integral, vertical rotor, submersible grinder progressing cavity type pump with a single mechanical seal, as manufactured by Environment One Corporation. The manufacturer supplied station shall be completely factory-build and tested wetwell grinder pump station consisting of a grinder pump suitably mounted in a basin constructed of high-density polyethylene (HDPE) with a minimum 70 gallon capacity, NEMA 6P electrical quick disconnect (EQD), pump removal system, stainless steel discharge assembly/shut-off valve, anti-siphon-valve/check valve, each assembled in the basin, electrical alarm panel and all necessary internal wiring and controls.
- D. The grinder pump station shall be either a wired model (cable connects the motor controls to the level controls through a watertight penetration) or w wireless model (wireless technology – "radio frequency identification" – communicates between the level controls and the motor controls.
- E. Wetwell shall be equipped with factory installed 4-inch diameter inlet grommet and 1.25-inch NPT female thread discharge connection.
- F. A factory supplied stainless steel check valve must be installed between the grinder pump station and the street main to protect against backflow from the sanitary sewer.
- G. A factory supplied NEMA 4X, corrosion-proof, thermoplastic enclosure shall include an audible alarm with manual silence, manual run feature and run

indicator, redundant start function with high-level alarm, a generator receptacle with auto transfer switch and GFCI receptacle.

8.3. LIFT STATION

8.3.1 DESIGN CALCULATIONS:

- A. The Developer shall perform a study and make the determination to assure that the lift station installation is sized to serve the overall sewage flows generated within the potential service area. The flow study shall include the Developer's plat boundary area as well as adjacent and future service areas. The service areas shall be the areas within that which could be served by the installation of the lift station(s).
- B. The station's design flow capacity shall be based on an average daily per capita flow with related peaking factors and inflow/infiltration allowances.
- C. Documentation of present and future service area flow rates for lift station size and capacity determination shall be provided to the City.
- D. The effects of the minimum flow conditions shall be estimated to be sure that retention of the sewage in the wet well will not create a nuisance and that pumping equipment will not operate too infrequently. The wet well shall be sized to provide full submergence on the pumps as recommended by the pump manufacturer and a minimum of three (3) minutes between pump cycles at pump design capacity.
- E. Lift station capacity shall meet the maximum rate of flow expected. The capacity of the receiving sewer shall also match the flow expected. At least two (2) pumping units shall be provided at each lift station installation. The pump shall have sufficient capacity and capability to efficiently handle the peak design flow with one (1) pump out of service and to ensure a minimum velocity of three (3) feet per second velocity in the force main.
- F. The force main shall be sized for a minimum velocity of three (3) feet per second and a maximum of eight (8) feet per second. The minimum diameter of the force main shall be six (6) inches.
- G. Three (3) copies of the Design Calculations shall be submitted to the City for review. As a minimum, the report shall include.
 - 1. Project description
 - 2. Projected flows
 - 3. Connection point with downstream capacity
 - 4. Wet well sizing

5. Run time calculations based on peak hourly and average annual flows for start-up and ultimate design conditions
 6. Cycle time calculations to verify pump start frequency is within allowable limits, including operation on backup float control
 7. Pump station head calculation to establish system curve
 8. Pump selection
 9. Force main size, length and material, local high and low points, and air/vacuum relief valve locations
 10. Generator and fuel supply sizing
 11. Odor potential calculations
 12. Wet well buoyancy calculations
- H. The above calculations and evaluation shall be provided for City review and approval in the form of a design report prior to, or together with, the plans for the developer extension, which shall be stamped by a professional engineer licensed in the State of Washington.
- I. A geotechnical evaluation of the proposed site shall be provided by the Developer, and shall be stamped by a licensed geotechnical engineer. Site or project characteristics to be evaluated shall include, but are not necessarily limited to: steep slopes; groundwater; erosion hazards; unusual drainage conditions; unstable soils; proposed construction on fill; proposed retaining wall construction; wet weather construction; recommendation for backfill, subgrade and foundation materials; and a determination of seismic potential in accordance with local building code. The geotechnical evaluation may be submitted as a supplement to the geotechnical report for the underlying plat, and shall include a minimum of one boring at the proposed wet well/dry well site to a minimum depth of 15 feet below the deepest structure foundation.

8.3.2 LOCATION:

- A. The Developer shall furnish a site layout for the lift station installation. The site plan shall clearly show the existing and proposed facilities as specified herein.
- B. The lift station shall be located as far as practicable from present or proposed built-up residential areas, and an asphalt concrete access road shall be provided. Access to the lift station should be directly from a street or road. Sites for sewage lift stations shall be of sufficient size for future expansion or addition, if applicable.
- C. The easement for the lift station site shall be submitted to the City for review prior to construction of the lift station. Lift station sites not located within the plat boundary shall be deeded to the City of Ilwaco.
- D. As a minimum, the site shall provide for the following:

1. Lift station, including wet well, effluent valving and emergency bypass pump connection
2. Auxiliary power, including automatic transfer switch
3. Electrical service and distribution
4. Telemetry/SCADA
5. 3/4-inch water service with reduced pressure backflow preventor and hose bib installed in an above ground slab enclosure on concrete. Furnish 50 feet of 3/4-inch heavy-duty rubber hose.
6. Odor control, as applicable for location and capacity.
7. Cuts and fills to provide level site for maintenance.
8. Asphalt or cement concrete pavement for access and maintenance areas.
9. Six (6') foot high black powder coated chain link fence with vertical vinyl slats in-laid for screening, enclosing the site and a 12-foot wide access gate. Landscaping may be incorporated on site for screening to eliminate the vinyl slats.
10. Overhead weather protection for all electrical panels normally accessed by City personnel for system maintenance and operation; weather protection shall extend over the electrical equipment but without blocking vector access to the wet well, and over the generator unit where feasible.
11. Area lighting as required by the City
12. Site drainage in accordance with City or County standards
13. Adequate clearances between equipment items and other facilities as required by all applicable codes, and as necessary for reasonable access for maintenance and repair, including access through all doors, hatches and lids
14. Separation from easements for stormwater detention facilities and other major utility structures

8.3.3. LIFT STATION REQUIREMENTS:

- A. The sewage lift station shall be Flygt submersible, centrifugal, nono-clogging pumps and a Flygt Mix-Flush valve as approved by the City. Construction shall be in compliance with O.S.H.A., U.L., A.S.T.M., N.E.C. and other applicable codes and regulations. The station shall be constructed and anchored to comply with Seismic Zone 3 requirements.
- B. The lift station shall have, as a minimum, two sewage pumps. The pumps shall have sufficient capacity and capability to efficiently handle the peak design flow with one pump and to ensure a minimum velocity of 3 feet per second in the force main. Design calculations and pump curves indicating the same shall be provided with the submittal information.

- C. The sewage lift station supplier shall check the station during installation to determine if the installation is correct. Written confirmation of each visit and recommendations shall be provided to the City.
- D. All pumps shall be tested to ensure that the vibration limits are within the standards of the current Hydraulic Institute Standards. Rotating assemblies shall be spin balanced by the pump station manufacturer prior to vibration testing. Factory test results shall be provided to the District prior to station delivery. Following installation of the pump station at the site and prior to startup, the pumps shall be retested for vibration by the pump station manufacturer. Copies of all test results shall be included in the maintenance and operation information.
- E. The sewage lift station supplier shall provide a minimum of four (4) hours of training for City personnel at the station site during start-up.
- F. The sewage lift station supplier shall provide four (4) complete copies of maintenance and operation material to the City. Maintenance and operation material shall include a complete discussion of pump control strategy in narrative form, including operational troubleshooting procedures, startup and reset procedures, and the calibration, set up and testing of level set points, gauges and alarms.
- G. At a minimum, the station shall include the following:
 - 1. 6-foot diameter wet well.
 - 2. Aluminum double leaf locking wet well hatch positioned to allow removal of pumps and access to wet well.
 - 3. Wet well access ladder with ladder up safety post.
 - 4. Hoist socket installed adjacent to wet well.
 - 5. Stainless steel guide rails and supports.
 - 6. Discharge connection elbow and frame.
 - 7. Grip eye system consisting of a sufficient length of nylon line for the application, short length of high tensile strength proof-tested 316 stainless steel chain and forged steel "grip eye" for use with mechanical lifting device. System shall be appropriately sized of for the weight of the pump to be lifted.
 - 8. All wet well and valve vault hardware must be 316L stainless steel.
 - 9. Valve vault including resilient seat gate valves and pressure gauge.
 - 10. Aluminum double leaf locking valve vault hatch.
 - 11. Valve vault access ladder with ladder up safety post.
 - 12. Ductile iron piping between wet well and valve vault.
 - 13. Intrinsically safe circuits for intrusion switches and level switches.
 - 14. Intrusion alarm that will be triggered upon opening of the primary lid. Wire intrusion switches to be open-circuited in the hatch open position.
 - 15. Explosion proof J-box mounted on a vertical wall of the valve vault.

16. The wet well, valve vault and seal off vault shall be considered classified environments.
17. NEMA 4X stainless steel central control panel with circuit breakers and intrinsically safe circuits.
18. Control panel, electric meter, transfer switch, and motor starters installed in a building or mounted on single aluminum plate. If equipment is located out-of-doors the equipment must be covered with a roof structure with minimum 3-foot overhang.
19. Yard lighting.
20. Extended warranty – 24 months from start-up or 30 months from time of shipment whichever is first.
21. Document certifying the lift station is in compliance with the NEC.
 - Convenience receptacles, white, duplex, 20A, GFCI, in cast aluminum weatherproof boxes with full in-service covers. NEMA 3R GFI duplex receptical.
 - 3/4" conduit connection in electric panel for connection to the telemetry sub panel.
22. A permanent davit base shall be provided that is compatible with the City's portable jib crane.
23. Spare parts each pump:
 - Replacement pump shaft seal
 - Filter element for the seal filters
 - Volute gaskets
24. Touch up paint kit.

8.3.4. MOTORS

- A. The pump and motor shafts shall be the maximum diameter available for these units.
- B. Pump motors shall be 3-phase, 60-cycle, 480-voltage. Motors larger than 25 HP shall be furnished with soft start or variable frequency drives equipped with start rated bypass contactors. Where motors are used with VFDs, the motors shall be inverter duty rated and shall meet the applicable requirements of NEMA MG1.
- C. The motors shall have 1.15 service factor and be non-overloading for the full range of the curve unless otherwise approved by the City.

8.3.5. WET WELL:

- A. The wet well shall be precast concrete manhole sections and shall conform to manhole specification per Chapter 6 of these Standards, as modified herein. Joints between precast wall sections shall be confined O-ring or as otherwise approved.

- B. The wet well shall be provided with polypropylene manhole steps as specified for manholes.
- C. The wet well shall be checked to ensure all joints are watertight to prevent infiltration into and exfiltration from the wet well.
- D. The wet well floor, walls and underside of the top shall be coated to comply with the following:

Surface Preparation: Allow 28 days cure time for concrete. Sweep blast to provide a surface profile. Surface shall be clean, dry and free of contaminants.

Primer: Tnemec Series 201 Epoxoprime Applied at 6.0 to 8.0 mils dry film thickness.

Intermediate Filler and Surfacer: Tnemec Series 201 Filler and Surfacer. Applied as needed. After the application of the prime coat, the bugholes and surface voids shall be filled to ensure that the finish coat is monolithic and pinhole free.

Finish: Tnemec Series 280 Tneme-Glaze Applied at 8.0 to 10.0 mils dry film thickness.

Total System: 14.0 to 18.0 mils dry film thickness.

- E. The wet well shall provide for the volute of the pumps to be fully submerged and a minimum of three (3) minutes between pump cycles at pump capacity. The high water alarm shall be set a minimum of seven (7) inches below the invert of the lowest gravity sewer inlet pipe, or at an elevation as may be set by the City.
- F. The wet well shall be of pre-cast concrete construction with aluminum hatch covers for access. The flat slab concrete cover shall be provided with a 4-inch vent which is "hooked and screened".

8.3.6. CONTROLS:

- A. The control panel shall include:
 - Main disconnect
 - Panel mounted running light for each pump
 - Panel mounted overtemp light for each pump
 - Panel mounted prime fail light for each pump
 - Panel mounted ammeter for each pump to read percentage of load
 - Panel mounted running time meter for each pump

- Panel mounted HOA switches for each pump
- Spare contact on HOA switches to remotely indicate when the switch is in Auto position.
- Operator- in-Trouble push button, located on the panel outer door within 3 feet of the ground .
- Contact to allow remote start (same as hand operation – not auto off).
- HOA switches to be Cuttler Hammer and in hand mode not to be spring return.
- Mounting bracket for telemetry sub panel in station (size: 13 ½” L x 10” W x 6 ½” Deep).
- Local/Remote contact for the following alarms:
 - a) Low Alarm
 - b) High
 - c) Power/Phase Failure (single & 3-phase)
 - d) Pump Failure
- Panel mounted wet well gauge. Minimum 3” dial and read for depth of wet well
- Voltage monitor relays to protect the pump motors from single-phase reversal and low voltage
- Discharge check valve limit switches on each pump discharge
- Pump alternator, each cycle
- Panel mounted digital level displays connected in the loop outputs for each of the two pressure transmitters
- Panel mounted pressure transmitter “active” (green) and “available” (yellow) lights, one set for each pressure transmitter (energized by remote contacts).
- Uninterruptible power supply (UPS) of adequate capacity to maintain the connected alarm load in the control panel for a period of at least 10 minutes
- Control relays as required for pump starting, pump protection, and alarming functions; plus space for mounting 20% additional relays
- Twenty percent spare terminals for future use.

B. A terminal cabinet shall be provided within the pump station enclosure for the wet well mounted pump station for connection of all 120V/240V single phase circuits between the control panel and the pump station, to include:

- Sufficient terminals for connection of all 120V/240V circuits to the pump station, with 20% additional spare terminals, minimum
- Key activation/deactivation switch for the intrusion alarm, located on the outer door of the enclosure

8.3.7. ELECTRICAL SERVICE/CONTROLS & TELEMETRY SYSTEM:

- A. Codes and regulations exist at the federal, state, and local level dictating minimum acceptable requirements for electrical systems. The following standards shall be used as a basis for design and review.
- National Electric Code (NEC)
 - Occupational Safety & Health Act (OSHA)
 - State & Local Building Codes
 - National Electrical Code (NEC)
 - National Electrical Manufacturers Association (NEMA)
 - Underwriters' Laboratory (UL)
 - Insulated Power Conductor Engineering Association (IPCEA)
 - American National Standards Institute (ANSI)
 - Institute of Electrical & Electronic Engineers (IEEE)

8.3.8. ELECTRICAL SERVICE

- A. The local electric utility will be the primary source of electrical power. The Developer shall ascertain proper coordination between the nominal secondary delivery voltage supplied by Pacific County P.U.D. No. 2 and the connection to the lift station equipment. The electrical service shall be 4-wire, 3-phase, 60 hertz, with a solid neutral terminal at the disconnect or as may otherwise be required by Pacific County P.U.D. No. 2. This shall be confirmed with the Pacific County P.U.D. No. 2 and confirmed by the suppliers.
- B. All installation shall be approved by Pacific County P.U.D. No. 2 and shall be in conformance with the N.E.C. (current issue) U.L., O.S.H.A. and County and State electrical codes. Particular attention is directed to the fact that the State of Washington requires that electrical equipment and electrically powered equipment be listed or labeled by a testing laboratory (U/L or other Nationally Recognized Testing Laboratory) acceptable to the Washington State Department of Labor and Industries.
- C. The City shall be furnished with a certificate of final inspection by the inspecting agency.
- D. All wire shall be copper.
- E. All exposed conduit shall be rigid galvanized. All underground conduits shall be PVC with rigid galvanized PVC-coated elbows and rigid galvanized PVC coated transitions to exposed conduit.

- F. All underground conduits shall be marked with polyethylene tape placed 6-inches below finished grade and directly above the conduit.
- G. All conduit shall have a minimum of 24 inches of cover.
- H. Heating strips shall be provided for outside electrical enclosures.
- I. A service entrance shall be provided with a pedestal on which shall be mounted, as a minimum, the following equipment:
 - 1. Meter and meter can (as required by the P.U.D.)
 - 2. Meter C.T.S. (as required by the P.U.D.)
 - 3. Main disconnect circuit breaker in a NEMA, 3R, enclosure, with padlock to City standards.
 - 4. Service voltage shall be 277/480 volts, 3 phase, 4-wire, except as required by Pacific County P.U.D. NO. 2.
 - 5. Single phase services shall be 240/120 volt, 3 wire. Panels shall conform with NEMA 3R.
 - 6. A 120-volt duplex in NEMA 3R enclosure with padlock to City standards.
 - 7. Ground rod and connector wire in conduit to N.E.C. standards.
 - 8. Telemetry panel in a NEMA 3R enclosure with locking 3-point latch with PLC and radio, operator interface, annunciator, and auto dialer installed.
 - 9. Spread spectrum radio (Cellnet Series 4) and antenna, 902-928 MHz frequency range, tuned to 915 MHz of the type and length required to provide a signal compliant with the City's present radio system.
 - 10. Provide electrical single-line diagram showing all components and control between pedestal, lift station and generator with wire and conduit sizes.
 - 11. The City shall be provided with a complete reproducible set of as-constructed plans and details showing final location of all equipment, conduit and wire.

8.3.9. CONTROLS

- A. Control and instrument system plans shall thoroughly and completely depict system design. The plans, in conjunction with the specifications, shall define the type of control system, the type of components in the system, set points and the interface between the instrumentation and control system and the lift station system. To accomplish this, the control and instrument plan(s) shall include, as a minimum, the following:
 - 1. Control and instrumentation system legend and general notes
 - 2. Control, instrumentation and distribution diagram
 - 3. Plans showing location of all control, instrument, and distribution system equipment and components, both electrical and pneumatic
 - 4. All equipment and installation details

- B. The power, control and instrumentation systems shall be designed with both operational reliability and maintainability. Use standard products wherever possible.
- C. All components within the lift station system, including both internally and face-mounted instruments and devices, shall be clearly identified with phenolic nameplates of black background with white letters.
- D. All wiring between cabinet, equipment and components shall be marked and multiple color coded where applicable.
- E. All pump motors shall have an independent circuit breaker located within the lift station and the lift station shall have a main circuit breaker located outside the lift station.
- F. The pump controls shall be ultrasonic level controller type or pressure transducer type with float level sensor back-up, and shall provide for both pumps to operate at high water conditions. The control elevations shall be indicated on the plans, i.e., on-off, first pump on, second pump on, and high water alarm.
- G. The single-phase transformer for the lift station shall be as required for proper operation of the single phase side system.
- H. The lift station electrical circuit shall include generator starting and telemetry.
- I. A complete set of spare fuses shall be provided for all fused equipment.

8.3.10. TELEMETRY

- A. The City's telemetry system utilizes RUG9 RTUs for SCADA functions related to the wastewater collection systems. The RTUs report to a master unit at the City Wastewater Treatment Plant (WWTP). The master unit communicates with a personal computer running Wonderware *Intouch* software to allow Supervisory Control and Data Acquisition functions to take place.
- B. The RTUs shall be provided in enclosures with auxiliary equipment to facilitate connection of external signals to the RTU, and to monitor voltage and similar status signals. Communication with the RUG9 PLC at the WWTP must be via leased telephone lines to the City's WWTP office. Provide an OID complementary to the RUG9 PLC that matches existing Rugid pump station hardware used through the City of Ilwaco water/wastewater system. OID shall allow local display and change of all set points. It shall display all alarms and allow for Reset/Acknowledge functions. The OID shall be mounted in the face of the control panel and be rated such that the panel's UL rating shall be maintained.

- C. For each new lift station the Developer shall provide a RUG9 RTU that matches existing Rugid pump station hardware used throughout the City of Ilwaco water/wastewater system along with an enclosure, power supply, relays, surge protection devices for power and telephone lines, and other auxiliary devices as required for proper operation of the system. Typical discrete inputs for a station include:
- Commercial Power Fail
 - Three Phase Power Fail
 - Generator Run
 - Generator Fail
 - Wet Well High Level
 - Wet Well Low Level
 - Pump No. 1 Run
 - Pump No. 2 Run
 - Pump No. 1 Fail
 - Pump No. 2 Fail
 - Station High Temperature
 -
 -
 -
- D. Typical discrete outputs include:
- Start Generator (with an interposing relay driven by the RTU)
- E. Typical analog inputs include:
- Pump No. 1 Amperes
 - Pump No. 2 Amperes
 - Wet Well Level
 - Flow
- F. Provisions shall also be made for additional I/O signals by providing 20% spare terminals within the telemetry panel.
- G. The telemetry panel and all items contained therein shall be provided by Calvert Technologies, (509) 244-1839.
- H. The Developer shall also be responsible for correct set-up of the RTU with respect to the existing system configuration. This includes coordinating configuration parameters such as:

- RTU addressing
 - Master unit configuration
 - RTU configuration,
 - I/O point configuration (enable/disable format)
 - Debounce time
 - NO/NC inputs
 - Percent change reporting
 - High/low alarm limits
 - Accumulator sampling rates
 - Momentary/latched outputs
 - Signal adjustments (receive gain, transmit gain).
 - Incorporate pump station into the Wonderware computer screens at the WWTP.
- I. The Developer shall coordinate with the telephone utility and the City for obtaining proper telephone service to the site. The developer shall be responsible for obtaining, installing, and starting up the RTU for the new lift station. The Developer shall coordinate obtaining, installing and starting up the RTU with the City to ensure that the station is properly configured and functions correctly in conjunction with the existing system.
- J. All major components, including relays, timers, and power supplies shall be identified using phenolic or vilam engraved labels.
- K. Provide a 600 ohm impedance matching transformer for the telephone line.
- L. A line (surge) protector unit shall be provided for the telemetry equipment. The unit shall protect the equipment from transient and electrical surges on the telephone line. Protection shall include line fuses and clamps for voltages over 25 volts, gas tubes shall be provided as an integral part of the lighting protection unit.

8.3.11. .AUXILIARY POWER SYSTEM:

- A. Emergency power generation equipment shall be provided at the lift station site which will operate the lift station in the event of a commercial power outage.
- B. It is essential that the emergency system be designed with capacity and rating to carry safely the entire connected lift station load, including all pumps and ancillary loads unless otherwise approved by the City.
- C. The auxiliary power unit shall be complete in every respect and shall include, but not be limited to, the following:
1. Generator, control panel & circuit breaker.

2. Engine, radiator & exhaust system.
 3. Fuel tank. (Capacity for 24 hours full load plus 25%.)
 4. Generator set enclosure, lockable to City Standards.
 5. Automatic transfer switch.
 6. Block Heater
 7. Battery & rack.
 8. Battery charger.
 9. Conduit, wire and piping.
- D. The generator set and transfer switch shall be Cummins/Onan complying with the latest edition of Onan Corporation standard specifications and with the City Standards.
- E. The generator set shall be spark-ignited, liquid propane, or diesel if approved by the City, 60 Hertz, 1800 RPM, 3-phase, 277/480 volt standby power.
- F. The generator set shall include the following:
1. **Engine**
 - a. Single phase, 1500 watt coolant heater (115 VAC)
 2. **Generator Set**
 - a. Mainline circuit breaker
 - b. Weather-protective enclosure with mounted silencer (maximum noise level of 68 dBA at 23 feet)
 - c. 5-year basic power warranty
 3. **Accessories**
 - a. Batteries
 - b. Battery Charger, 2 AMP, 12 VDC, 120 VAC Input
 - c. Vibration Isolators, Pad Type
 4. **Control Panel**
 - a. Annunciator relays (12)
 - b. Run relay package (3)
 - c. Low coolant level shutdown
 - d. Anti-condensation space heater, 120 VAC
 - e. Oil temperature gauge
 - f. Wattmeter
 - g. Emergency stop switch
 5. **Fuel Systems**
 - a. Liquid LPG or diesel if approved by the City
 6. **Alternator**

- a. Anti-condensation heater, 120 VAC

7. Exhaust System

- a. Exhaust silencer (68 dBA at 23 feet)

8. Control Features

- a. Run-stop-remote switch
- b. Remote starting, 12-volt, 2 wire
- c. Coolant temperature gauge
- d. Field circuit breaker
- e. DC voltmeter
- f. Running time meter
- g. Lamp test switch
- h. Oil pressure gauge
- i. Fault reset switch
- j. Cycle cranking
- k. 12-light engine monitor with individual 1/2 amp relay signals and a common alarm contact for each of the following conditions:
 - i. Run (Green Light)
 - ii. Pre-Warning For Low Oil Pressure (Yellow Light)
 - iii. Pre-Warning For High Coolant Temp (Yellow Light)
 - iv. Low Oil Pressure Shutdown (Red Light)
 - v. High Coolant Temperature Shutdown (Red Light)
 - vi. Overcrank Shutdown (Red Light)
 - vii. Overspeed Shutdown (Red Light)
 - viii. Switch Off (Flashing Red Light- Indicates Generator Set Not In Automatic Start Mode)
 - ix. Low Coolant Temperature (Yellow Light)
 - x. Low Fuel (Yellow Light)
 - xi. Two Customer Selected Faults (Red Light)

9. AC Meter Package

- a. Order with NFPA 110 monitor to meet code requirements.
- b. AC voltmeter (dual range)
- c. AC ammeter (dual range)
- d. Voltmeter/ammeter phase selector switch with an off position
- e. Dual scale frequency meter/tachometer
- f. AC Rheostat (panel mounted) for + 5% voltage adjust

10. Transfer Switch

- a. The transfer switch shall include the following:
 - i. Sized for full station and auxiliary equipment load plus 25%.
 - ii. Delayed transition, including dry contacts for signaling the generator to start on commercial power failure.

- iii. Contacts for signaling commercial power fail, generator power fail, connected to utility power, and connected to generator power.

11. Pole Configuration

- a. Poles - 3 (Solid Neutral)

12. Frequency

- a. 60 Hertz

13. Application

- a. Appl - Utility to Genset

14. System Options

- a. Three phase, 3-wire or 4-wire

15. Enclosure

- a. B002 Type 3R; Intended for outdoor use (dustproof and rainproof)

16. Listing

- a. Listing - UL 1008

17. Programmed Transition

- a. Programmed Transition, 1-60 sec.

18. Exerciser Clock

- a. 7-day solid-state exerciser clock, programmable as to day and time of day for generator exercising.

19. Applications Modules

- a. Monitor - Phase Sequence/Balance

- G. Suitable guards shall be provided on all electrical parts to minimize the personal shock hazard.
- H. Generator shall be broken-in sufficiently to permit application of full load immediately upon installation.
- I. Generator supplier shall provide all tools for the generator set as recommended and required by the manufacturer.
- J. Generator installation shall be checked by the supplier after installation to determine that the installation is correct. Written confirmation shall be provided to the City. Generator supplier shall perform a full load test for two (2) hours after installation is complete. Provide resistive load bank for this test.

- K. Generator supplier shall provide a minimum of four (4) hours of training for City personnel at the station site during start-up.
- L. Generator manufacturer shall provide four (4) copies of the maintenance and operation manual. These manuals shall be complete and shall include all information necessary to allow City personnel to maintain the generator.
- M. Generator mounting pad shall be reinforced concrete to carry the weight of the unit and shall extend a minimum of 3 inches beyond generator housing. Chamfer all edges 3/4-inch.
- N. Propane tank support pad shall be as above.
- O. Diesel tanks (if diesel generator is approved by the City) shall be a subbase tank.
- P. The generator shall be provided with a 2 year service agreement and set of manufacturer's recommended spare parts, including filters, belts, hoses, and similar items.

8.3.12. FORCE MAIN

- A. The force main shall be a minimum 6-inch diameter ductile iron Class 52 polyethylene or epoxy lined or high density polyethylene (HDPE) and provided with a continual positive slope. There shall be no intermediate high point between the pump station and the force main discharge point (depth shall be a minimum of 4'-0"). All pipes (gravity and pressure) entering and leaving the wet pit or dry pit shall have flexible couplings within 18-inches of the structure.
- B. Discharge of the force main to the gravity sewer shall be made at a manhole with the force main penetration core drilled and the force main aligned to discharge towards the downstream pipe. The invert of the force main shall be 0.1 – foot above the invert of the downstream pipe. Channel the manhole as required.
- C. An emergency pump connection equipped with a Cam Lock fitting and cap shall be located near the wet well.

8.3.13. LIFT STATION TEST PROGRAM

- A. The Developer shall perform, as a minimum, the following tests and provide the City written documentation of the date performed and results obtained. Pump tests shall meet or exceed specified capacity. The City shall be informed of the testing schedule 48 hours prior to the test.

1. Demonstrate proper station operation under normal operating and individual alarm conditions
 2. Pump capacity by drawdown test, for each pump operating alone and each combination of multiple pump operation. Record amperes and furnish pressure gauge to record static head and total dynamic head for each condition, across a representative wet well range as specified by the City's Engineer
 3. Ultrasonic level sensor or pressure transducer operation, float switch operation
 4. Generator load test
 5. Automatic transfer to and from auxiliary power; generator load test; generator operation under pump load
 6. Telemetry control to terminal strip
 7. Sewage pump vibration test
- B. Fill water for testing shall be obtained in accordance with the cross-connection policies of the local water purveyor.
- C. Documentation of satisfactory installation shall be provided for the pump station and the auxiliary generator. Documentation of satisfactory installation shall be in the form of a notarized manufacturer's affidavit submitted by the manufacturer or an authorized representative, certifying that:
1. the equipment has been properly installed and lubricated,
 2. the equipment is in accurate alignment,
 3. the manufacturer was present when the equipment was placed into operation,
 4. the manufacturer has checked, inspected, and adjusted the equipment as necessary,
 5. the equipment is free from any undue stress imposed by connecting piping or anchor bolts,
 6. the equipment is not imposing any undue stress on any connecting members,
 7. the equipment has been operated satisfactorily under full load conditions,
 8. the manufacturer has inspected his equipment during the operational demonstrations and system validation tests to the extent specified, and the equipment is fully covered under the terms of the guarantee.

8.3.14. OPERATIONS AND MAINTENANCE INFORMATION:

- A. Record (as-constructed) information for the lift station shall be recorded by the Contractor on site during construction, and shall be incorporated into the record drawings for the developer extension. In addition, the Developer shall submit operations and maintenance information for the lift station equipment.

- B. The following information shall be furnished for all items of equipment installed on the project requiring operational and/or maintenance procedures, and for any additional items indicated by the Engineer. Level of detail and format shall conform to current City specifications.
1. Lubrication Information: This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed.
 2. Drawings and Diagrams: Drawings shall include record (as-constructed) version of dimensional outline drawings in either full-size (22"x34") or half-size (11"x17") format. Diagrams shall include record (as-constructed) versions of schematic electrical and connection diagrams, showing points of connection, numbers of circuits, size and number of conduits and conductors.
 3. Start-Up Procedures: These instructions shall consist of equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.
 4. Operating Procedures: These instructions shall consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.
 5. Preventive Maintenance Procedures: These instructions shall consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.
 6. Overhaul Instructions: These instructions shall consist of the manufacturer's directions for the disassembly, repair and reassembly of the equipment and any safety precautions that must be observed while performing the work.
 7. Parts List: This list shall consist of the generic title and identification number of each component part of the equipment. Component equipment items provided by other manufacturers shall be identified with the manufacturer's name, part description, and part number.
 8. Spare Parts List: This list shall consist of the manufacturer's recommendations of number of parts and quantities that should be stored by the Owner and any special storage precautions that may be required. Note spares provided.
 9. Exploded View: Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When

exploded or cut views are not available, plan and section views shall be provided with detailed callouts.

10. Copies of factory test results, startup check lists, manufacturer's affidavits of proper installation, initial equipment set points and related documentation
 11. Maintenance Information Summaries as specified herein.
- C. A minimum of two preliminary review copies of the manufacturer's equipment O&M manuals shall be submitted to the City for review at the time of equipment delivery and not later than 7 days prior to product training. Additional copies may be submitted to expedite review or if return of markups is desired. A minimum of two preliminary copies of the manuals will be retained (one by the City and one by the Engineer) until the final versions of the manual are approved. Allow 14 days for Engineer's review.
- D. Four (4) copies of the final acceptable operational and maintenance materials shall be submitted to the Engineer prior to project acceptance.
- E. Maintenance Information Summaries (MIS) shall be provided for the following component equipment items, within the appropriate section of the equipment manuals, prepared according to the format specified herein:
1. non-clog pumps
 2. sump pumps
 3. heating and ventilation equipment
 4. standby generator
 5. valves (larger than 1" in size)
- F. Maintenance information summaries shall contain the following information compiled from manufacturer's recommendations in the order shown.
1. Description or name of item of equipment.
 2. Manufacturer.
 3. Name, address, and telephone number of local manufacturer's representative.
 4. Serial number (where applicable).
 5. Equipment nameplate data including model number.
 6. Recommended maintenance procedures:
 - i. Description of procedures.
 - ii. Maintenance frequency required.
 - iii. Lubricant(s) or other materials required (where applicable), including type of lubricant, lubricant manufacturer, and specific compound.

- iv. Additional information as required for proper maintenance.
- 7. Spare parts provided (where applicable).
- G. All operation and maintenance information shall be comprehensive and detailed, and shall contain information adequately covering all normal operation and maintenance procedures. The information shall be organized in high quality D-style 3-ring binders. The binders shall be provided with spine labels, cover inserts, a table of contents and tab sheets to permit easy location of desired information. Each volume shall contain an index for the entire set. Sheets shall be 3-hole punched, and not otherwise punched for comb binding or spiral binding.
- H. All information shall be specifically for items of equipment installed in the Project. Material not directly applicable shall be removed, neatly lined out, or omitted from catalogs or other printed information.
- I. Lubricants shall be described in detail, including type, recommended manufacturer, and manufacturer's specific compound to be used.
- J. If manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated.

CHAPTER 9

MISCELLANEOUS UTILITY SERVICES AND ADDITIONAL DEVELOPMENT REQUIREMENTS

9.1 GENERAL

The standards established by this chapter represent the minimum standards for the design and construction of additional facilities. More restrictive standards may be mandated by the City due to localized conditions. The following design and construction considerations shall apply.

9.2 UTILITY SERVICES

All utility lines, including electric, telephone, fire alarm and television cables shall be placed underground prior to paving. Easement for maintenance of all utilities, both on and off-site, shall be provided as applicable to the satisfaction of the Public Works Superintendent.

9.3 STREET LIGHTING

Street lighting shall be provided by the Developer to the guidelines established by the Public Works Superintendent. All costs of such, including, but not limited to, design, underground wiring, light standard base and luminaire shall be borne by the developer. The City shall approve of all street lighting plans as furnished by the developer to include size, spacing, height and type of pole/illuminare.

9.4 CABLE TELEVISION

Service lines (suitable empty conduits placed and capped) for cable television shall be installed underground (location as approved by the Public Works Superintendent) on all subdivisions regardless of whether or not cable television service is currently available.

9.5 STREET NAME AND TRAFFIC SIGNS

All street name signs and traffic directional signs shall be approved by the County E-911 Coordinator in conjunction with the City. All costs of providing the signs, to include the installation, labor, materials, and other relevant costs associated with determining the type, location, and associated work items shall be invoiced to and paid by the developer. Preference will be given to short easily understood names which do not bear resemblance to similar street and place names within the area.

9.6 LANDSCAPING

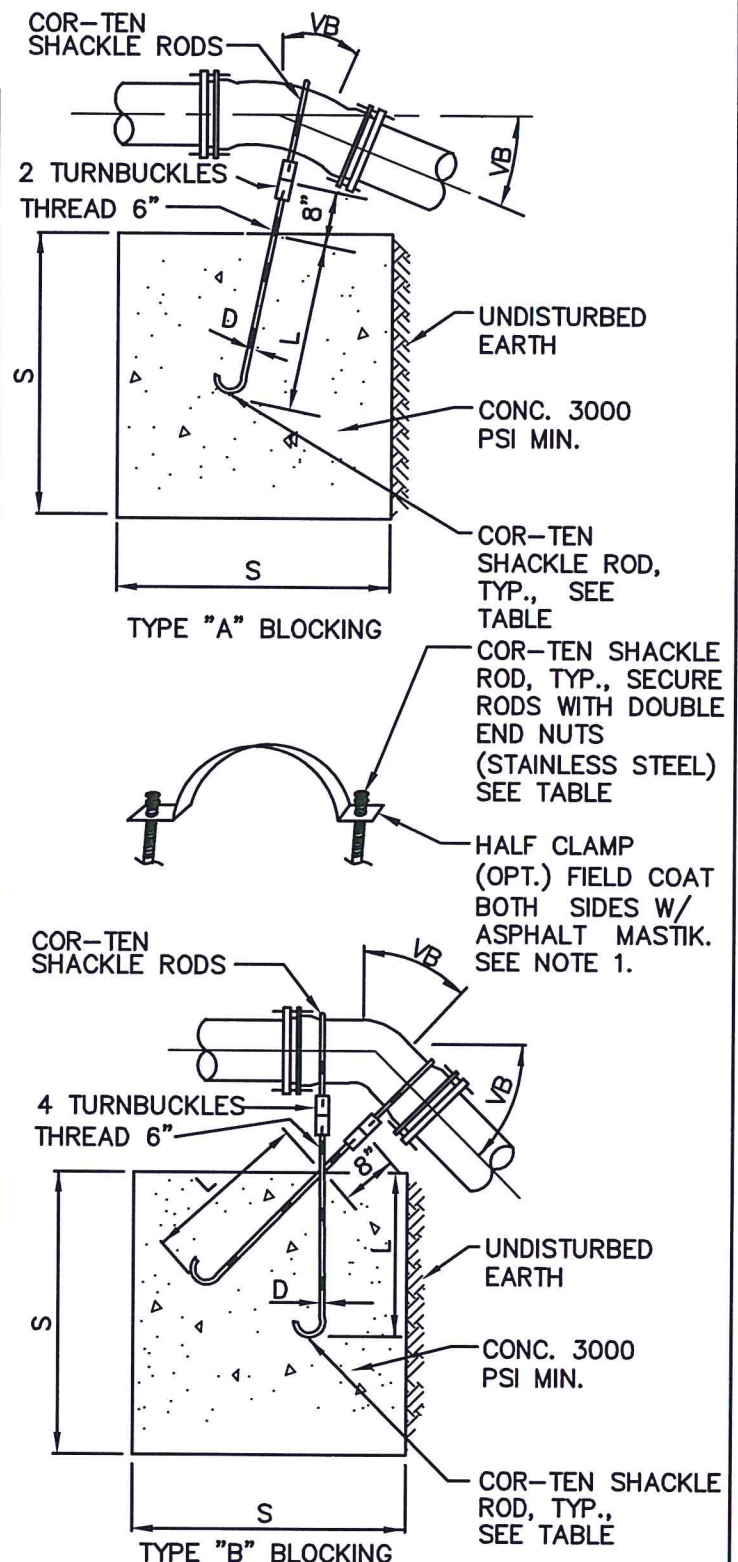
Street landscaping shall be provided by the developer and a landscaping plan shall be submitted as part of the plan package for City review and approval.

TYPE "A" BLOCKING						
FOR 11 1/4"-22 1/2"-30° VERTICAL BENDS						
PIPE SIZE NOMINAL DIAMETER— INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	No. OF CU. FT. OF CONC. BLOCKING	S SIDE OF CUBE LIN. FT.	D DIAM. OF SHACKLE RODS (2) INCHES	L DEPTH OF RODS IN CONCRETE LIN. FT.
4"	300	11 1/4	8	2	5/8"	1.5
		22 1/2	11	2.2		2.0
		30	17	2.6		
6"	300	11 1/4	11	2.2	5/8"	2.0
		22 1/2	25	2.9		
		30	41	3.5		
8"	300	11 1/4	16	2.5	5/8"	2.0
		22 1/2	47	3.6		
		30	70	4.1		2.5
12"	250	11 1/4	32	3.2	5/8"	2.0
		22 1/2	88	4.5		3.0
		30	132	5.1		
16"	225	11 1/4	70	4.1	7/8"	3.0
		22 1/2	184	5.7		4.0
		30	275	6.5		1 1/4"
20"	200	11 1/4	91	4.5	7/8"	3.0
		22 1/2	225	6.1		4.0
		30	330	6.9		4.5
24"	200	11 1/4	128	5.0	1"	3.5
		22 1/2	320	6.8		4.5
		30	480	7.9		5.5

TYPE "B" BLOCKING						
FOR — 45° VERTICAL BENDS						
		VB		S	D	L
4"	300	45	30	3.1	5/8"	2.0
6"			68	4.1		
8"			123	5.0		
12"	250		232	6.1	3/4"	2.5
16"	225		478	7.8	1 1/8"	4.0
20"	200		560	8.2	1 1/4"	
24"			820	9.4	1 3/8"	4.5

NOTES:

1. HALF CLAMP, WASHERS AND NUTS MAY BE SUBSTITUTED FOR TURNBUCKLE ASSEMBLY. ALL OTHER SPECIFICATIONS THE SAME.



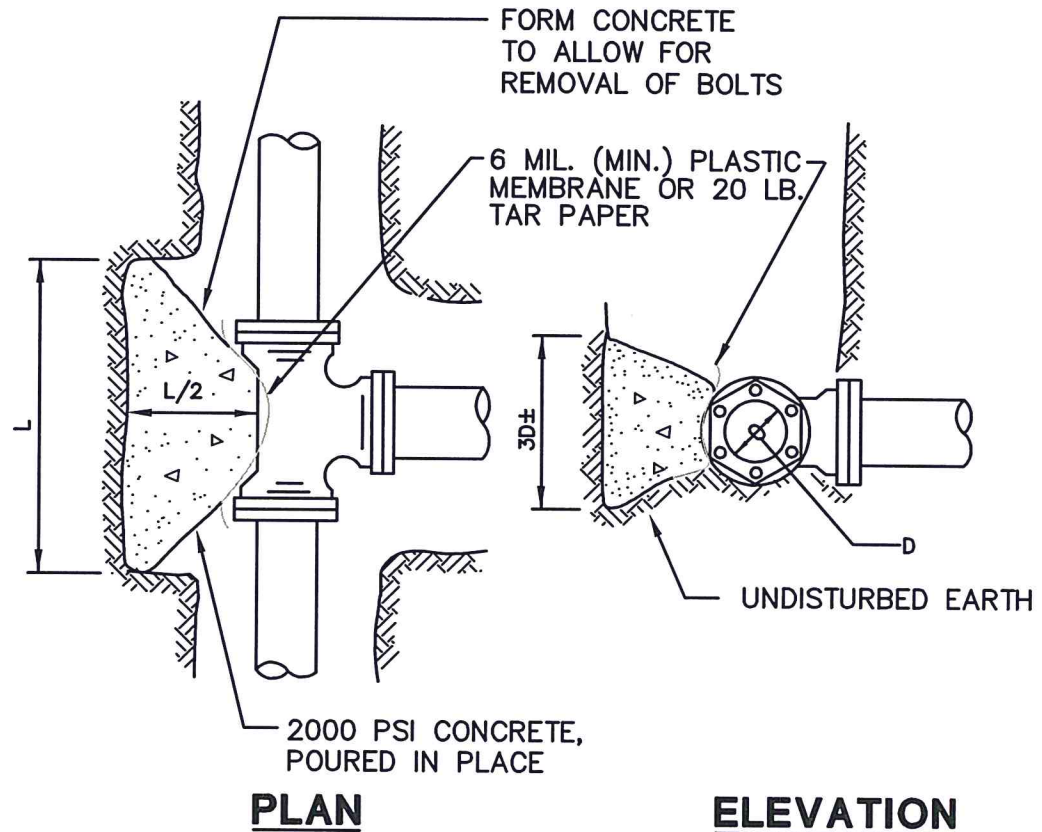
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2014 DEVELOPER STANDARDS

FIGURE G1
VERTICAL ANCHOR BLOCK

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CONSULTING ENGINEERS

MINIMUM BEARING AREA TABLE

FITTING D	TEE	90°	45°	22 1/2°	11 1/4°
6"	4 SQ.FT.	6 SQ.FT.	3 SQ.FT.	2 SQ.FT.	2 SQ.FT.
8"	7 SQ.FT.	10 SQ.FT.	6 SQ.FT.	3 SQ.FT.	2 SQ.FT.
10"	10 SQ.FT.	15 SQ.FT.	9 SQ.FT.	5 SQ.FT.	3 SQ.FT.
12"	14 SQ.FT.	22 SQ.FT.	12 SQ.FT.	6 SQ.FT.	4 SQ.FT.
16"	25 SQ.FT.	38 SQ.FT.	21 SQ.FT.	11 SQ.FT.	7 SQ.FT.
18"	32 SQ.FT.	48 SQ.FT.	27 SQ.FT.	14 SQ.FT.	8 SQ.FT.



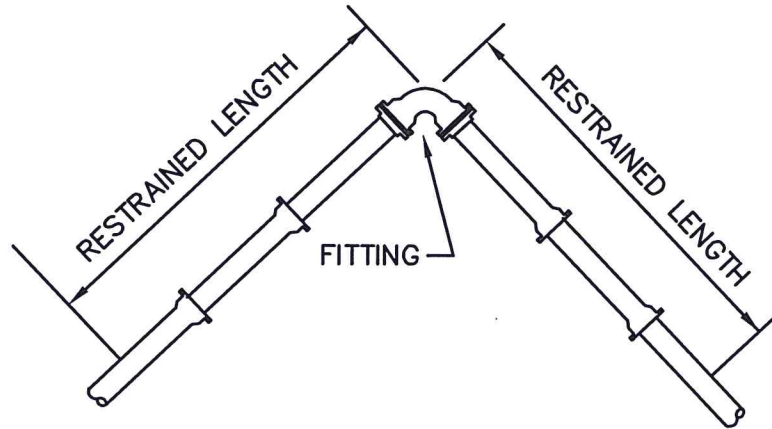
NOTES:

1. BEARING AREA TABLE BASED ON 250 PSI PRESSURE AND 2000 PSF SOIL BEARING. IF PRESSURE IS GREATER OR SOIL BEARING IS LESS, THE THRUST BLOCK SIZE SHALL BE INCREASED.
2. THIS TABLE REPRESENTS THE "MINIMUM" CONSTRUCTION STANDARDS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZE OF ALL THRUST BLOCKS BASED ON EXISTING AND LOCAL CONDITIONS.

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FIGURE G2
THRUST BLOCKS


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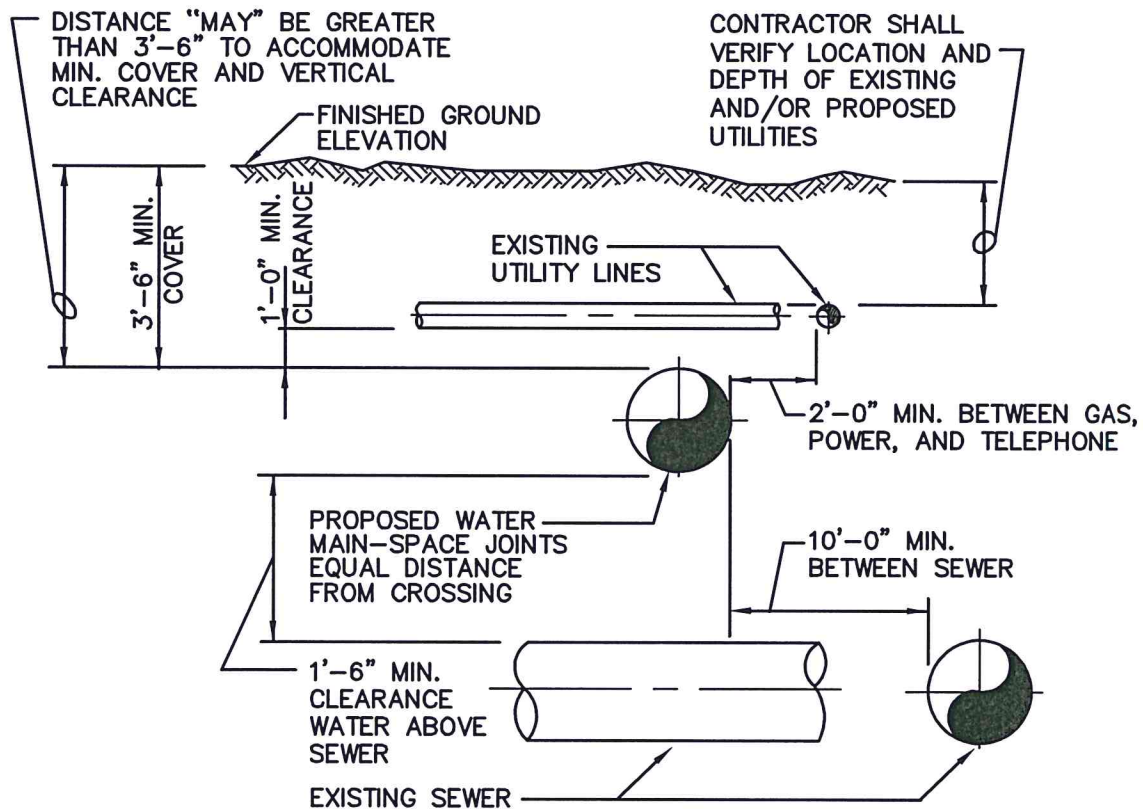


PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE OR DEAD END CAP
RESTRAINED LENGTH IN FEET					
4"	40	17	8	4	30
6"	55	23	11	6	39
8"	73	31	15	8	53
10"	88	37	18	9	67
12"	103	43	21	10	82
16"	133	55	27	13	110
18"	145	60	29	15	124

NOTES:

1. RESTRAINED LENGTHS SHOWN ARE MINIMUM AND FOR LINEAL FEET REQUIRED ON EACH SIDE OF FITTING INDICATED.
2. FOOTAGES ARE BASED ON 250 PSI PRESSURE AND 42 INCHES COVER. IF PRESSURE IS GREATER OR COVER IS LESS, THE RESTRAINED LENGTH SHALL BE INCREASED.
3. THIS TABLE REPRESENTS THE "MINIMUM" CONSTRUCTION STANDARDS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE RESTRAINED LENGTHS.





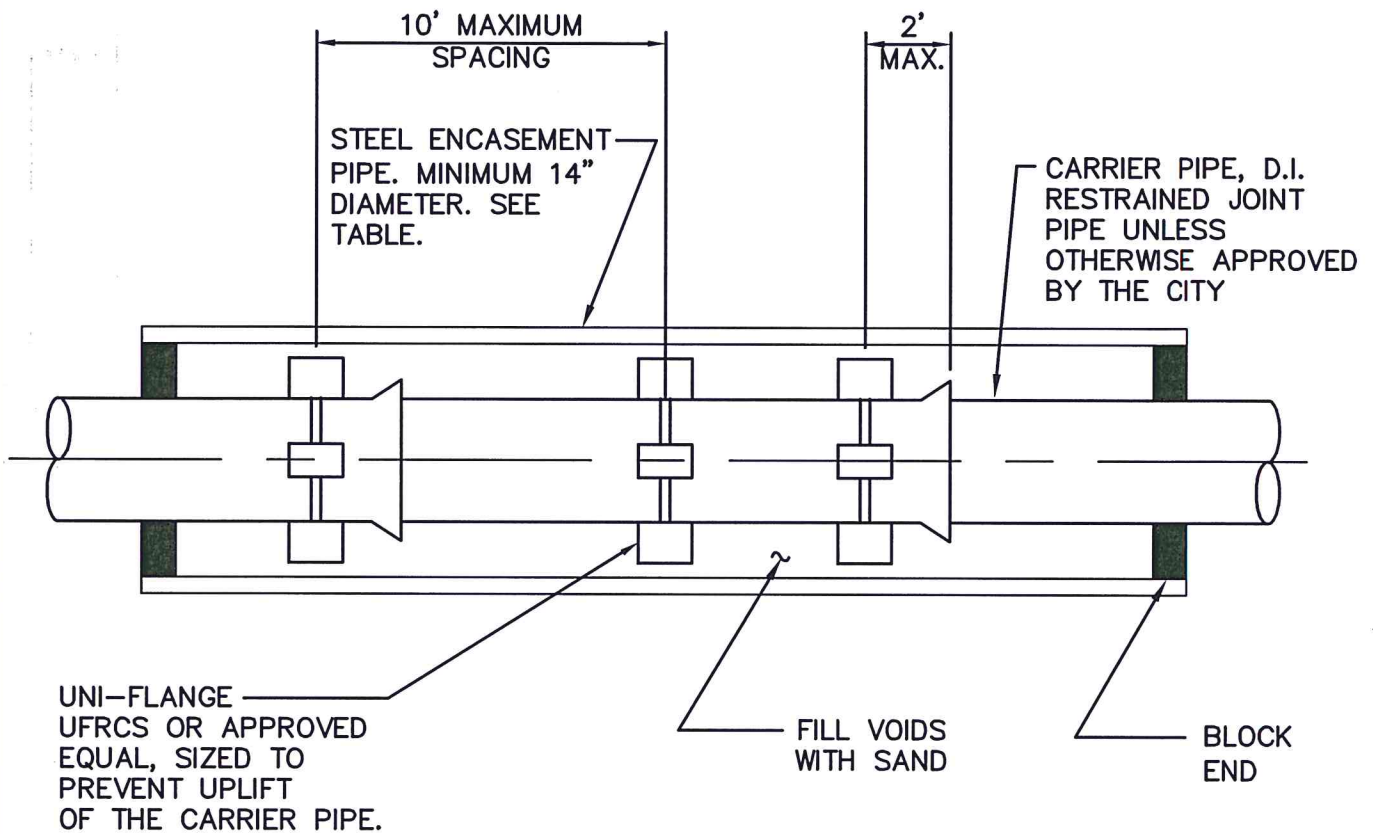
NOTES:

1. REGULATORY AGENCY REQUIREMENTS SHALL SUPERSEDE CITY STANDARDS IF MORE STRINGENT.

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2014 DEVELOPER STANDARDS

FIGURE G4
TYPICAL UTILITY CROSSING


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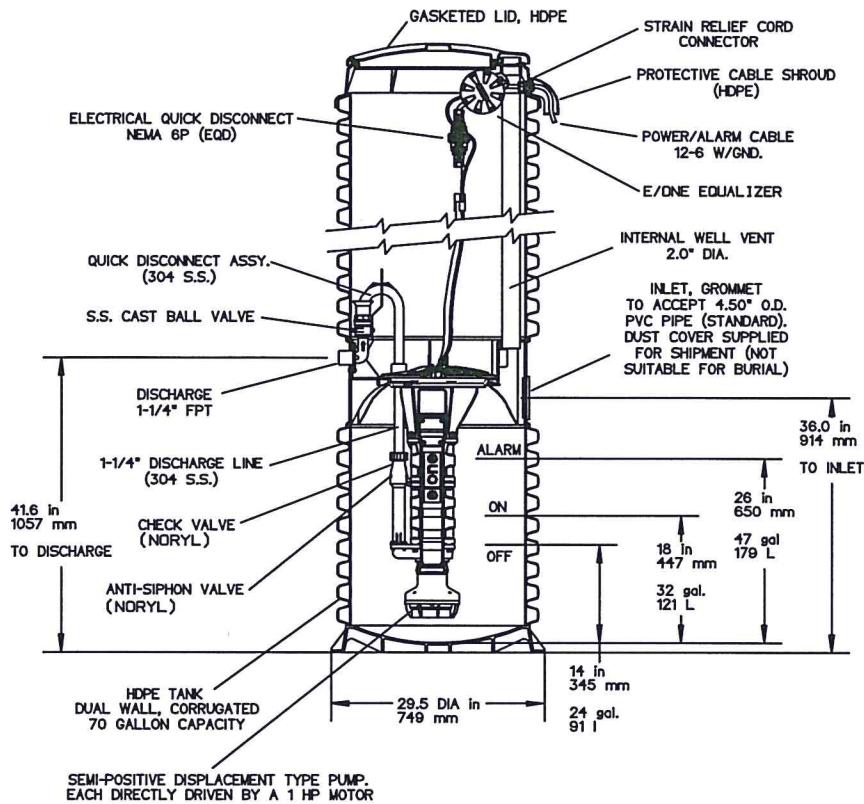
MINIMUM ENCASEMENT DIAMETER	
CARRIER DIA.(IN.)	ENCASEMENT DIA.(IN.)
6	14
8	18
10	21.5
12	23
16	30

NOTES:

1. CONTRACTOR TO VERIFY LINE AND GRADE PRIOR TO FILLING VOIDS WITH SAND.
2. CARRIER PIPE WITHIN THE LENGTH OF THE ENCASEMENT PIPE SHALL HAVE RESTRAINED JOINTS.
3. REGULATORY AGENCY REQUIREMENTS SHALL SUPERSEDE CITY STANDARDS IF MORE STRINGENT.
4. CASING PIPE SHALL BE SCHEDULE 40 STEEL PIPE, WELDED JOINT, AND MINIMUM YIELD STRENGTH (F_y) OF 35 KSI.

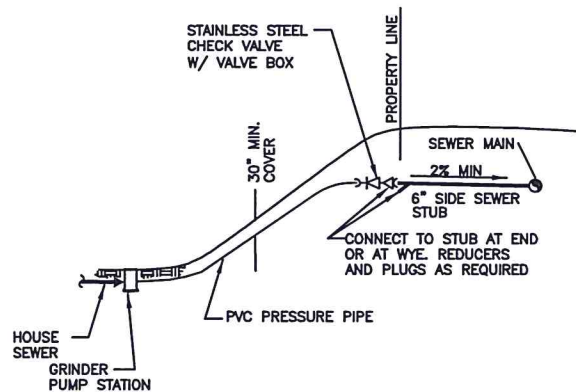
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2014 DEVELOPER STANDARDS
FIGURE G5
ENCASEMENT/CARRIER PIPES


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GRINDER PUMP

NOT TO SCALE



TYPICAL DISCHARGE PIPING

NOT TO SCALE

GENERAL NOTES:

- THE MINIMUM REQUIREMENTS FOR A RESIDENTIAL SEWAGE PUMPING SYSTEM CONNECTING A SINGLE RESIDENCE TO THE CITY'S SYSTEM ARE SPECIFIED AS FOLLOWS. THE CITY ACCEPTS NO RESPONSIBILITY FOR THE DESIGN, OPERATION AND MAINTENANCE OF SUCH PRIVATELY OWNED AND OPERATED SYSTEMS.
- ALL EQUIPMENT AND ACCESSORIES SHALL BE STANDARD MANUFACTURED ITEMS AND THOSE COMING IN DIRECT CONTACT WITH SEWAGE SHALL BE SPECIFICALLY MANUFACTURED FOR SEWAGE USE.
- LIFT STATION MUST BE LOCATED OUTSIDE THE BUILDING. IF THE STATION IS COMPLETELY BURIED, INSTALL A 48\"/>

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE GPS-1
GRINDER PUMP STATION
SINGLE FAMILY RESIDENCE


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CONSULTING ENGINEERS

GENERAL NOTES:

COMPLETE E/ONE MODEL DH071 PACKAGED SEWER GRINDER LIFT STATION TO INCLUDE THE FOLLOWING:

GRINDER PUMP WITH 1 HP SUBMERSIBLE SINGLE PHASE MOTOR

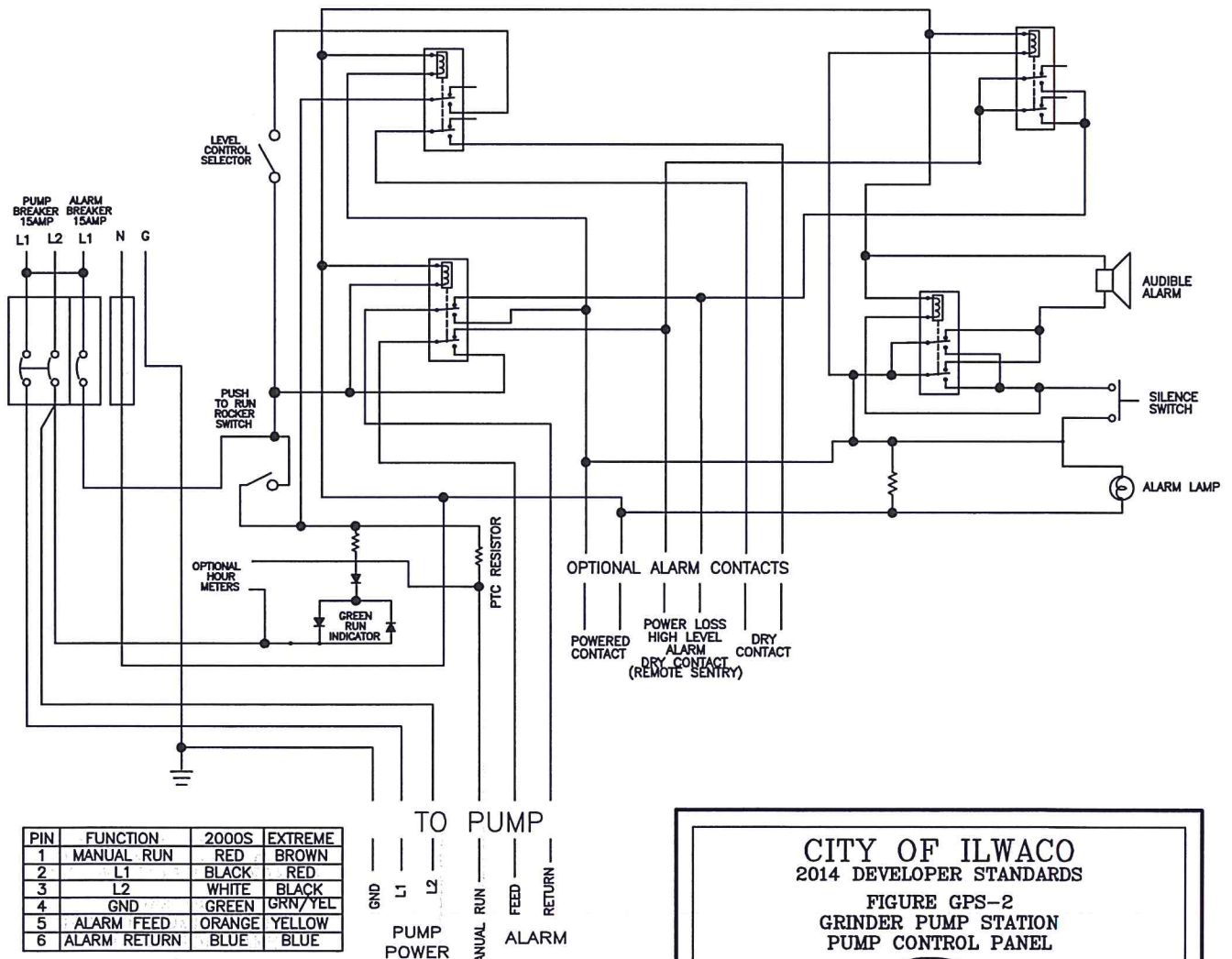
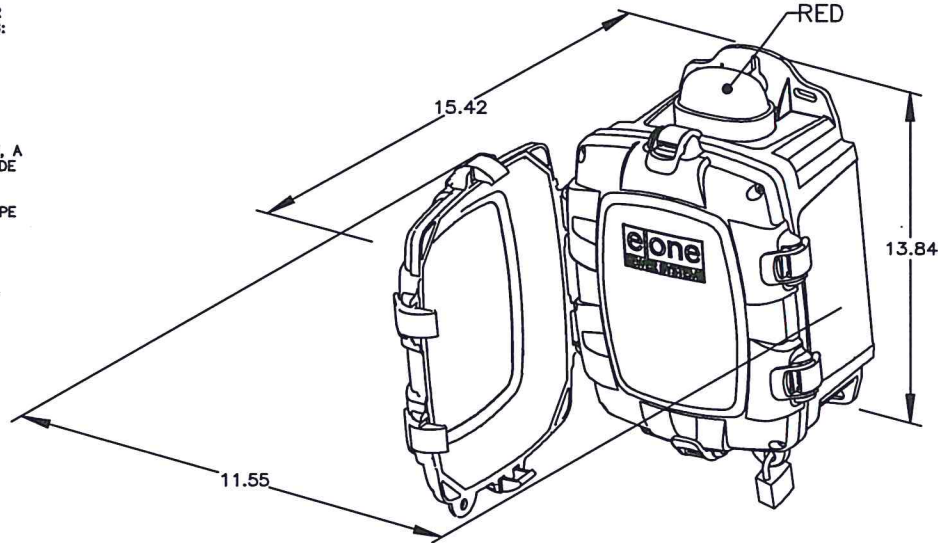
NON-FOULING WASTEWATER PRESSURE SWITCHES LEVEL CONTROLLERS

DISCHARGE PIPING SHALL INCLUDE A CHECK VALVE, A GATE VALVE AND NPT FEMALE CONNECTION OUTSIDE OF SUMP

INFLUENT PIPING SHALL PROVIDE HUB FOR PVC PIPE OUTSIDE OF SUMP

NEMA 6P ELECTRICAL QUICK DISCONNECT

NEMA 4X, UL-LISTED ALARM PANEL, LABEL COVER, EQUIPPED WITH AUDIBLE AND VISUAL ALARM.



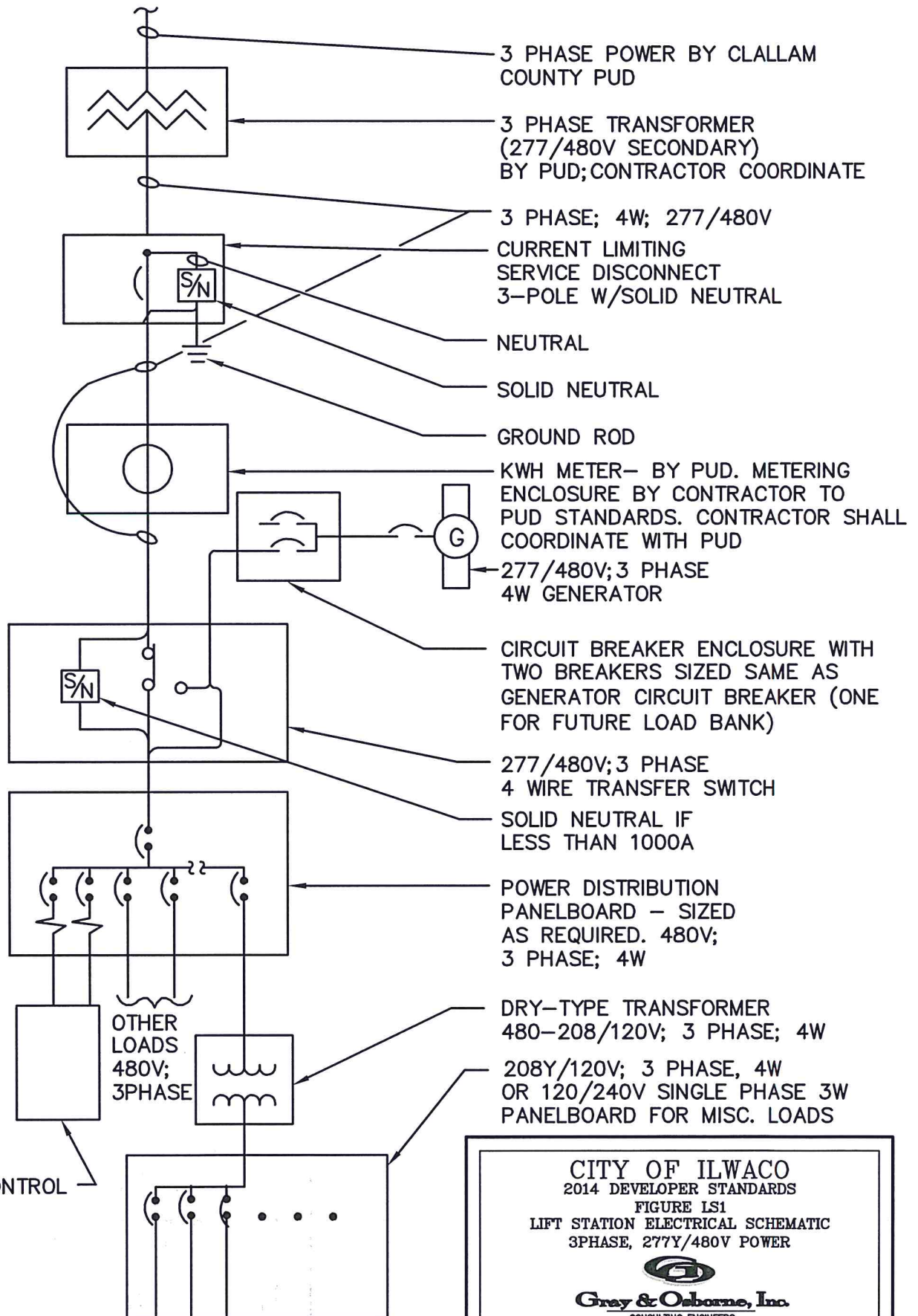
CONTROL CABLE:

TYPE TC: DIRECT BURIAL, 12AWG, SIX CONDUCTOR


CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE GPS-2
GRINDER PUMP STATION
PUMP CONTROL PANEL

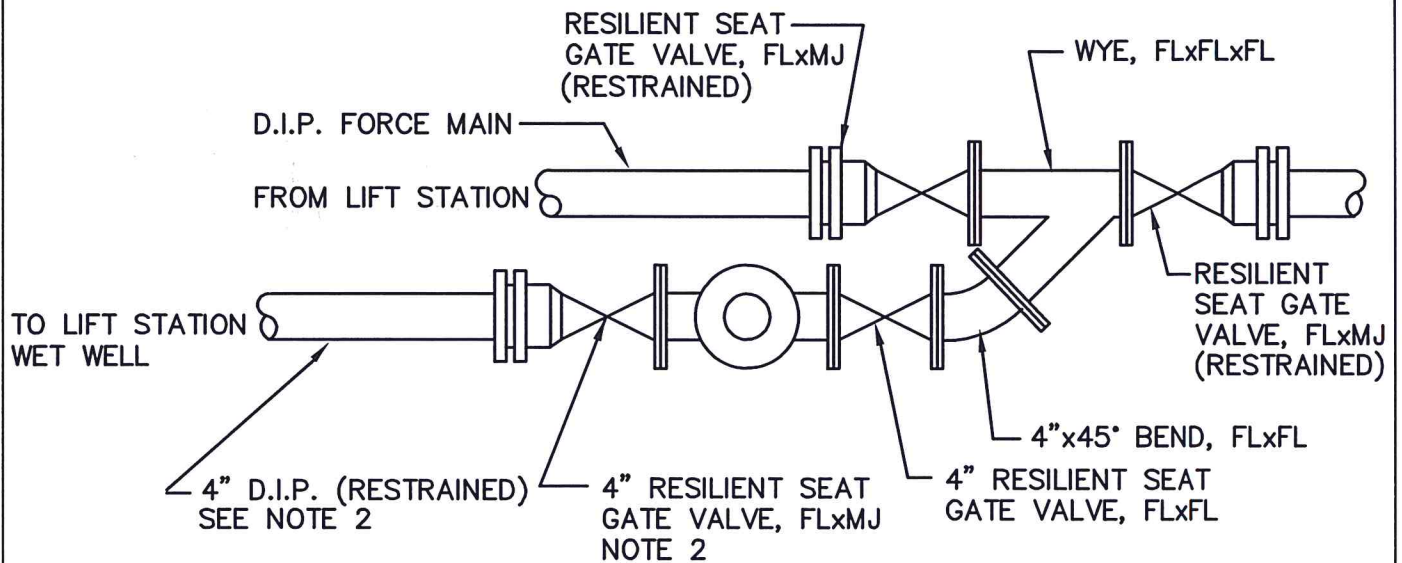
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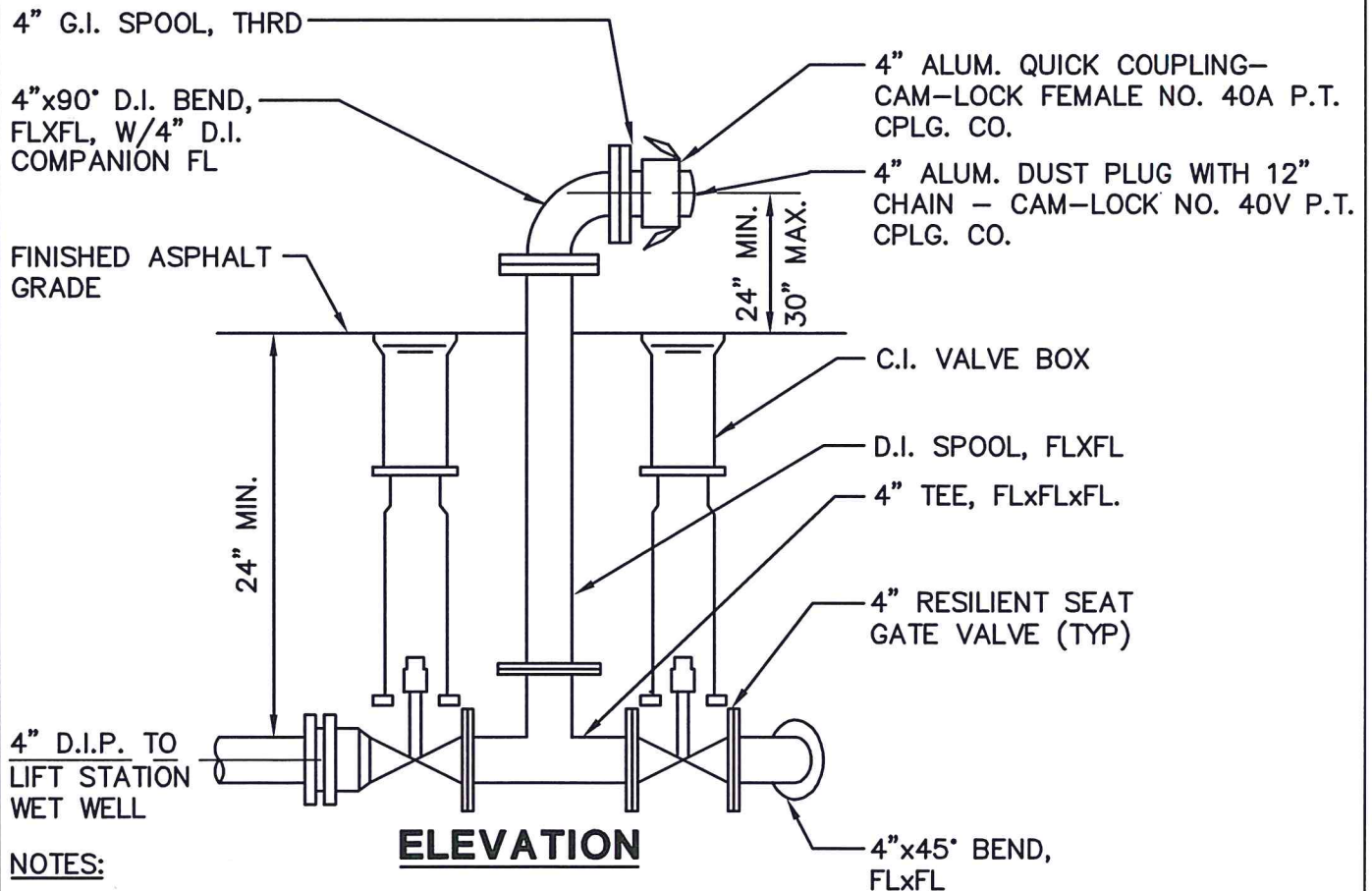
CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE LS1
LIFT STATION ELECTRICAL SCHEMATIC
3PHASE, 277Y/480V POWER



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CONSULTING ENGINEERS



PLAN



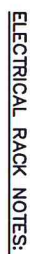
NOTES:

1. LOCATE AND ORIENT PUMP CONNECTION AS DIRECTED BY CITY.
2. PIPE AND FITTINGS TO BE ADJUSTED BASED ON DISTANCE TO WET WELL (FLxPE, OR FLxMJ RESTRAINED)
3. 4" SIZE SHOWN, LARGER SIZE MAY BE REQUIRED TO MEET STATION CAPACITIES.

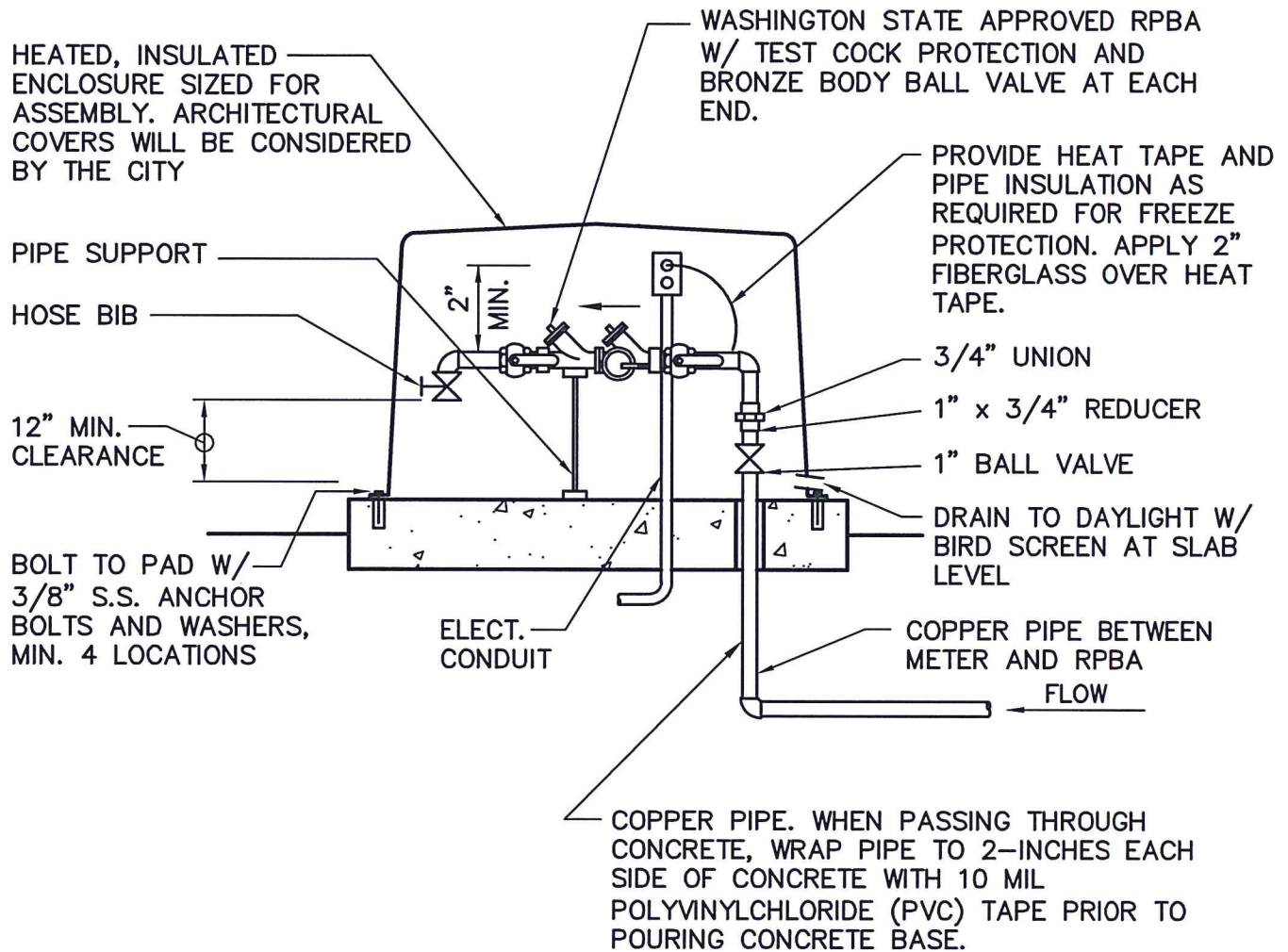
CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE LS2
EMERGENCY PUMP CONNECTION


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CONSULTING ENGINEERS

ELECTRICAL RACK DETAIL



1. NOTCH TOP OF PIPE AND ATTACH 3/8"x8"x16" GALV KNIFE PLATE FOR BOLTED ROOF FRAME CONNECTION. CLOSE TOP OF PIPE W/ 1/4" GALV. PLATE. ATTACH TABS (NOTE 3) AS REQUIRED. SHOP WELD.
2. CONSTRUCT ROOF FRAME W/3 LONGITUDINAL MEMBERS AND 4 TRANSVERSE MEMBERS. MINIMUM. ATTACH GALV 3/8" PLATE EACH END FOR BOLTED CONNECTION TO COLUMN KNIFE PLATE (NOTE 6). SHOP WELD.
3. DRILL TABS FOR BOLTED CONNECTION OF ROOF FRAME BRACES AND EQUIPMENT RAILS. SHOP WELD TO 6" COLUMN. RADIUS EXPOSED CORNERS.
4. METAL ROOFING 24 GAUGE. KLIP-RIB BY AEP SPAN OR EQUAL. FOREST GREEN COLOR. ATTACH TO ROOF FRAME PER MFR RECOMMENDATIONS.
5. ALL BOLTED CONNECTIONS TO BE 3/4"Ø STAINLESS STEEL. SHOP DRILL ALL HOLES. TOUCH UP ALL WELDS AND HOLES W/COLD GALVANIZING COMPOUND.
6. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PER SPECIFICATIONS.
7. ALL CONNECTIONS SHALL BE WELDED AROUND THE FULL PERIMETER OF THE JOINT, EXCEPT WHERE BOLTED CONNECTIONS ARE INDICATED.



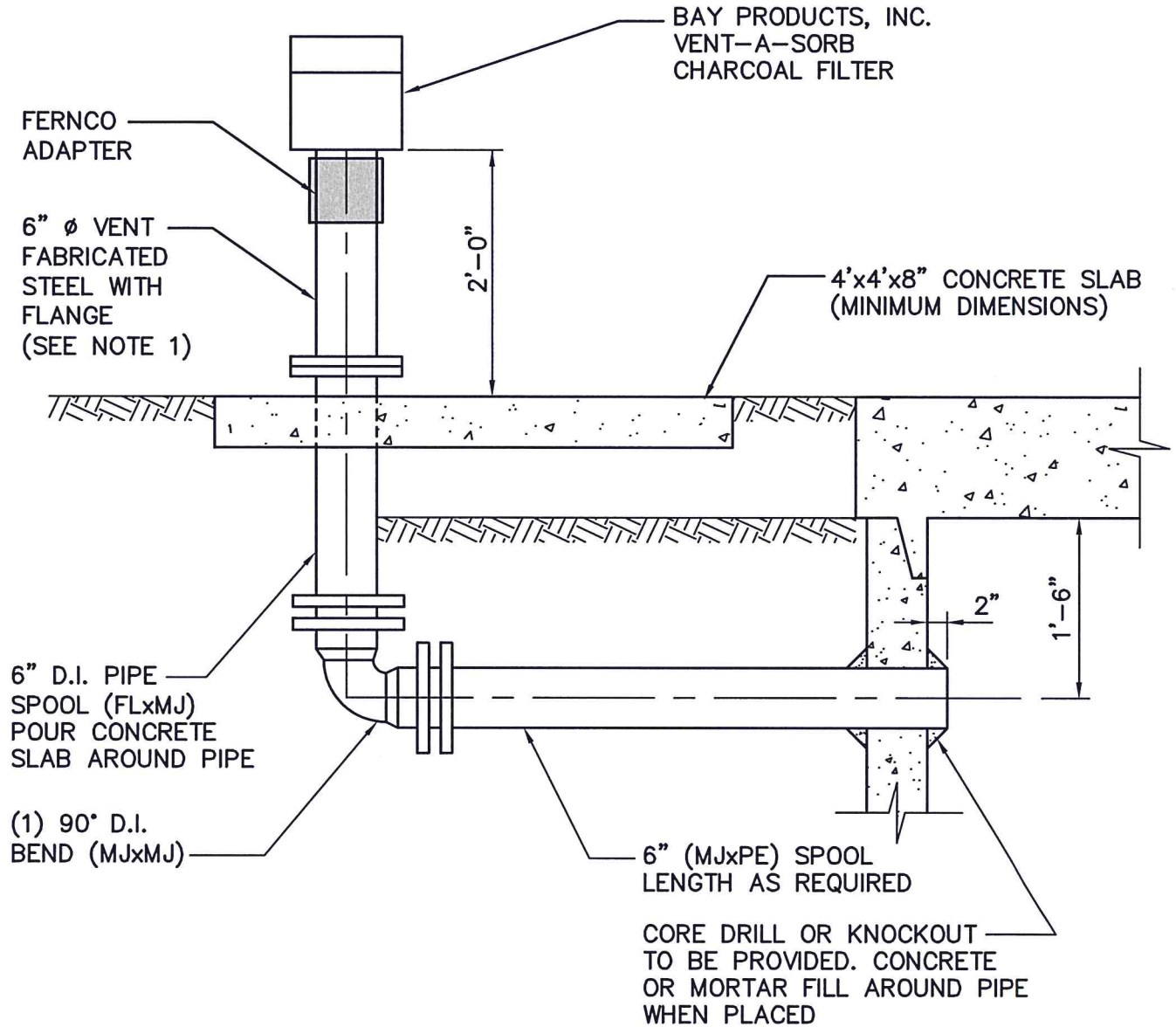
NOTES:

1. CONCRETE TO BE 2500 PSI (MINIMUM) MIX WITH AIR ENTRAINMENT.
2. COMPLETE ALL WORK IN ACCORDANCE WITH STATE, CITY AND MANUFACTURER STANDARDS.
3. SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL RPBA IS APPROVED BY THE CITY AND TESTED/CERTIFIED BY A WASHINGTON STATE LICENSED TESTER.
4. DIELECTRIC UNIONS SHALL BE USED TO SEPARATE DISSIMILAR MATERIALS.
5. NO BRANCH CONNECTIONS ALLOWED BETWEEN METER AND RPBA.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE LS4
3/4" REDUCED PRESSURE BACKFLOW ASSEMBLY


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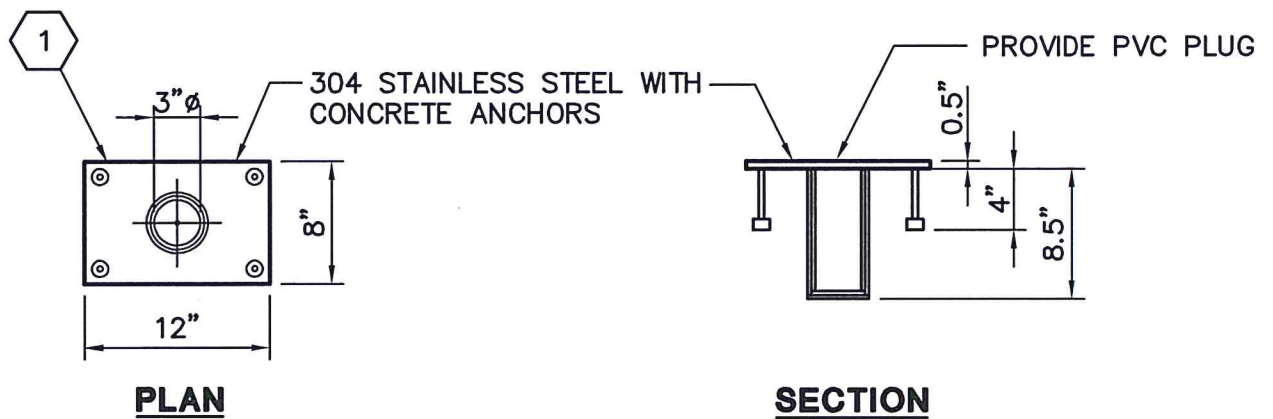
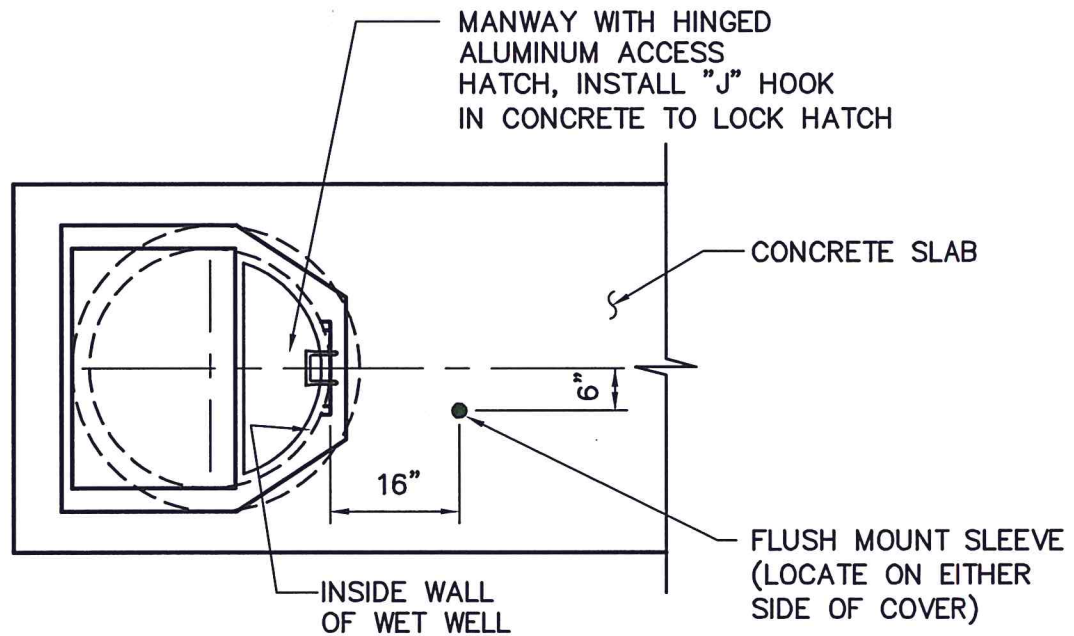
NOTES:

1. HOT DIP GALVANIZE VENT "CANE" AND FLANGE AFTER FABRICATION. AFTER GALVANIZING VENT, PAINT WITH TWO COATS OF KELLY MOORE 6100-855, MACHINE GREEN, OR AS DIRECTED BY THE CITY.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE LS5
VENT DETAIL


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FLUSH MOUNT SLEEVE

NOT TO SCALE

1 FLUSH MOUNT SLEEVE MODEL 128 BY UNIQUE CONCEPTS LTD.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE LS6
FLUSH MOUNT SLEEVE


Gray & Osborne, Inc.
CONSULTING ENGINEERS

COVER, SEE V-S4A
FOR DETAILS

COVER, SEE V-S4A
FOR DETAILS

48' DIAMETER

PRECAST MANHOLE

FLOW

CONCRETE FILLET
AROUND MANHOLE

FOUNDATION
GRAVEL

UNDISTURBED
EARTH

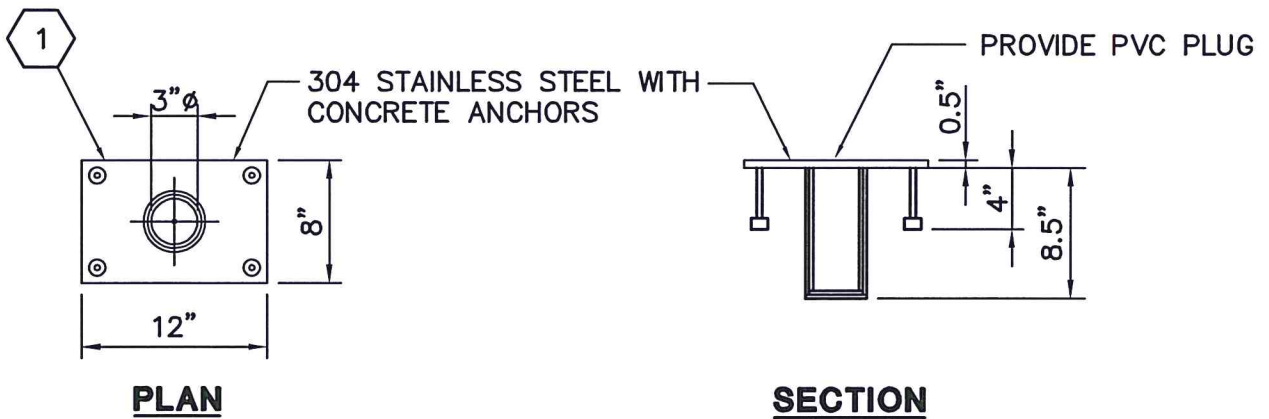
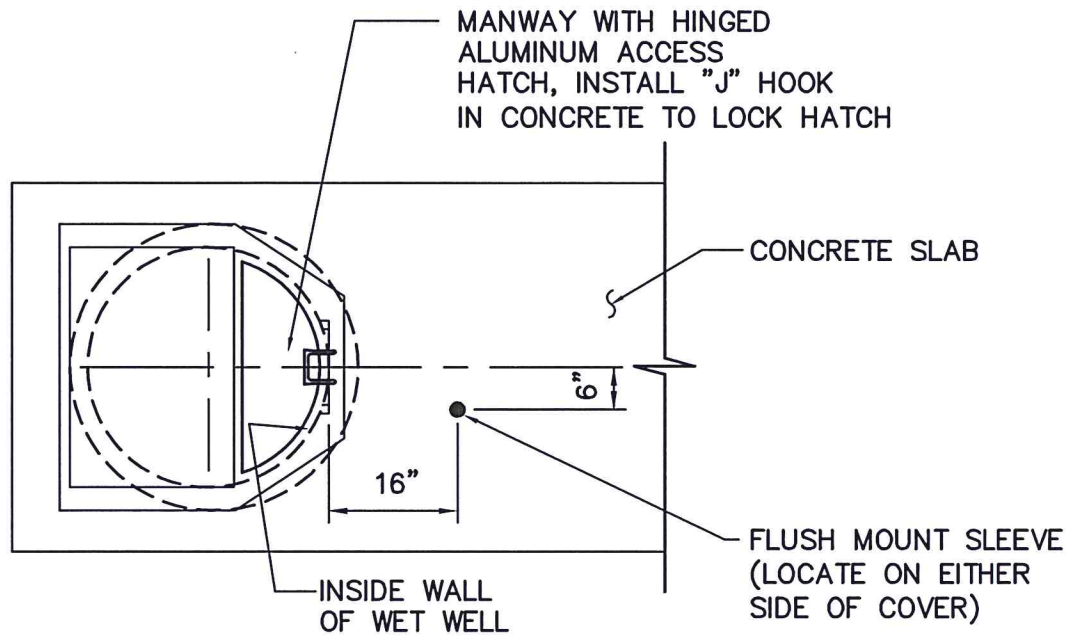
NOTES:

1. SEE STANDARD MANHOLE FOR ADDITIONAL
CALLOUTS ON V-S4A AND V-S5.
2. ACCESS HATCH AND MANHOLE STEPS
LOCATED AT 45° TO THROUGH FLOW

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE 1S7
ROCK CATCH MANHOLE


Gray & Osborne, Inc.
CONSULTING ENGINEERS



1 FLUSH MOUNT SLEEVE MODEL 128 BY UNIQUE CONCEPTS LTD.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE LS8
FLUSH MOUNT SLEEVE


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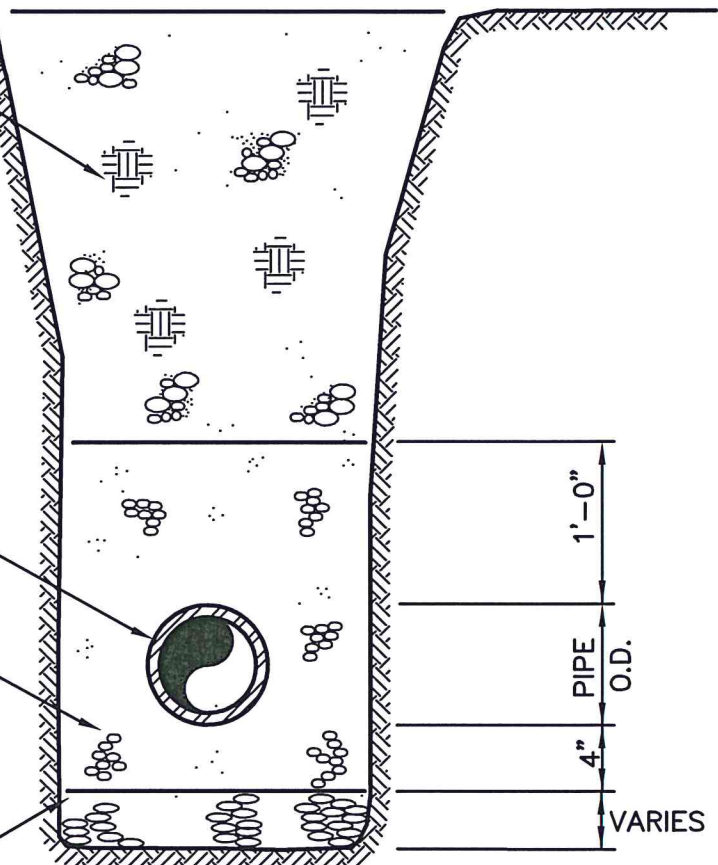
FINISHED GRADE

IMPORTED COMPACTED
BACKFILL. EXCAVATED
MATERIAL, GRAVEL BASE, OR
CDF ALLOWED WITH
ENGINEER APPROVAL.
(COMPACTION REQUIREMENTS
PER MODIFIED PROCTOR
ASTM D1557 AND AS
REQUIRED BY PERMITS.)

SDR 26
PVC SEWER PIPE
SEE NOTE 4

PIPE BEDDING 3/4-MINUS
COMPACTED TO OBTAIN
COMPACTION REQUIREMENTS PER
MODIFIED PROCTOR ASTM D1557
AND AS REQUIRED BY PERMITS.

FOUNDATION GRAVEL
AS REQUIRED



NOTES:

1. BACKFILL MATERIAL AND COMPACTION SHALL BE ON BOTTOM, SIDES AND TOP OF PIPE AND SHALL BE IN CONFORMANCE WITH CITY OF SEQUIM STANDARDS AND/OR COUNTY, CITY, STATE PERMIT REQUIREMENTS.
2. PIPES SHALL BE RESTRAINED IN FILL OR PREVIOUSLY DISTURBED MATERIAL.
3. CLAY OR BENTONITE DAMS SHALL BE INSTALLED ACROSS THE TRENCH AND TO THE FULL DEPTH OF THE GRANULAR MATERIAL IN ALL AREAS OF STEEP SLOPES, STREAM CROSSINGS AND WETLAND TO PREVENT MIGRATION OF WATER ALONG THE PIPELINE.
4. PIPE SHALL BE C900 FOR BURIAL DEPTHS OF 16 FEET AND DEEPER.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S1
SANITARY SEWER TRENCH SECTION
(PLASTIC/GRAVITY)


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MANHOLE LOCATION

AIR RELIEF
ASSEMBLY

TEE

PLAN

REINFORCED CONC COLLAR
SEE V-S4B

24" DIA.

FINISHED GRADE

48" DIA. X 8" THICK
(MIN.) PRECAST
CONCRETE SLAB.

1" HIGH PRESSURE HOSE
WITH CHICAGO COUPLING
ON EACH END. LENGTH OF
HOSE TO EXTEND JUST
BELOW LID.

48" MIN. INSIDE DIAMETER
PRECAST MANHOLE.

4'-0" MIN.
1'-6" MIN.

COMBINATION SEWAGE
AIR AND VACUUM
VALVE. TAG VALVE NON
POTABLE TRANSMISSION
LINE. SEE NOTE 2.

2" 90° BASE ELL
WITH 2" PIPE SUPPORT

6" BLIND FLANGE, TAP
FOR 2" AIR & VACUUM UNIT

MJ TEE, SIZE AS REQ'D
WITH 6" FLANGE ON BRANCH

2" PLUG VALVE
THD X THD

FOUNDATION GRAVEL
UNDISTURBED EARTH

4" DRAINAGE OUTLET
PIPE TO SEWER
MANHOLE DRAIN MIN.
1% SLOPE

PRECAST CONC. BASE
WITH CONC. FILL, OR
CAST IN PLACE CONC.
BASE

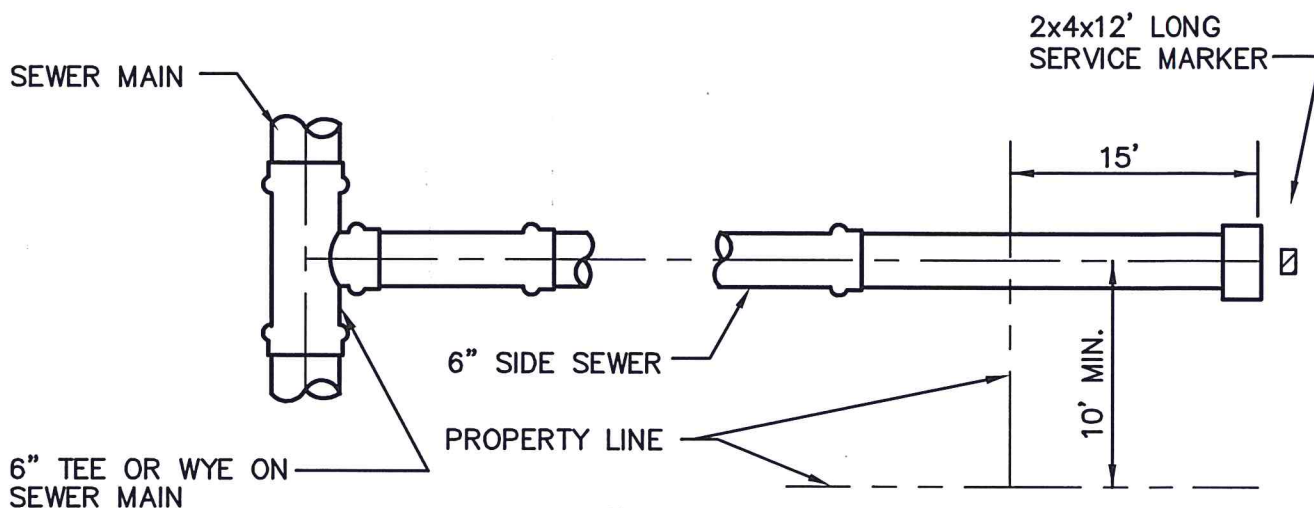
NOTES:

1. SEE STANDARD MANHOLE CALLOUTS ON V-S4A AND V-S5.
2. APCO, CRISPIN OR VALMATIC HEAVY-DUTY COMBINATION AIR AND VACUUM VALVE (SHORT BODY) W/STAINLESS STEEL INTERNALS, EPOXY COATING AND FLUSHING ATTACHMENTS. SEATS SHALL BE SUPPLIED FOR THE FOLLOWING WORKING PRESSURES: 20 PSI, 20-150 PSI.
3. 2" PIPING AND FITTINGS SHALL BE BRASS.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE 10
SANITARY SEWER AIR AND
VACUUM RELEASE ASSEMBLY

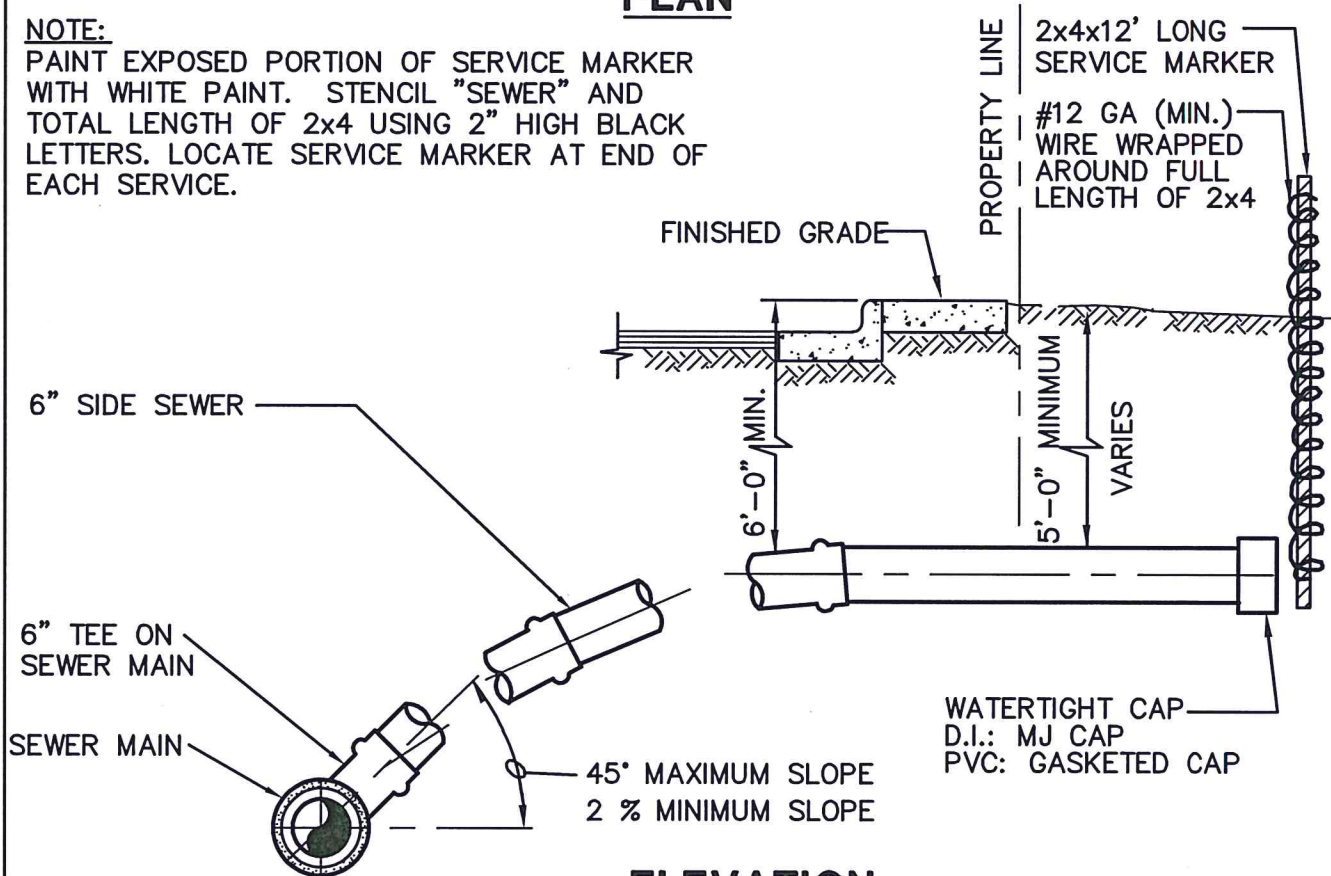

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PLAN

NOTE:

PAINT EXPOSED PORTION OF SERVICE MARKER WITH WHITE PAINT. STENCIL "SEWER" AND TOTAL LENGTH OF 2x4 USING 2" HIGH BLACK LETTERS. LOCATE SERVICE MARKER AT END OF EACH SERVICE.



ELEVATION

NOTES:

1. MAXIMUM DEFLECTION NOT TO EXCEED PIPE MANUFACTURER RECOMMENDATIONS.
2. SIDE SEWER LATERAL SHALL BE THE SAME MATERIAL AS THE MAIN LINE SEWER AND BEDDED USING 3/4"-MINUS CRUSHED GRAVEL, COMPACTED BELOW, ON SIDES AND ON TOP OF PIPE.
3. SEPARATE LATERAL REQUIRED FOR EACH LOT.

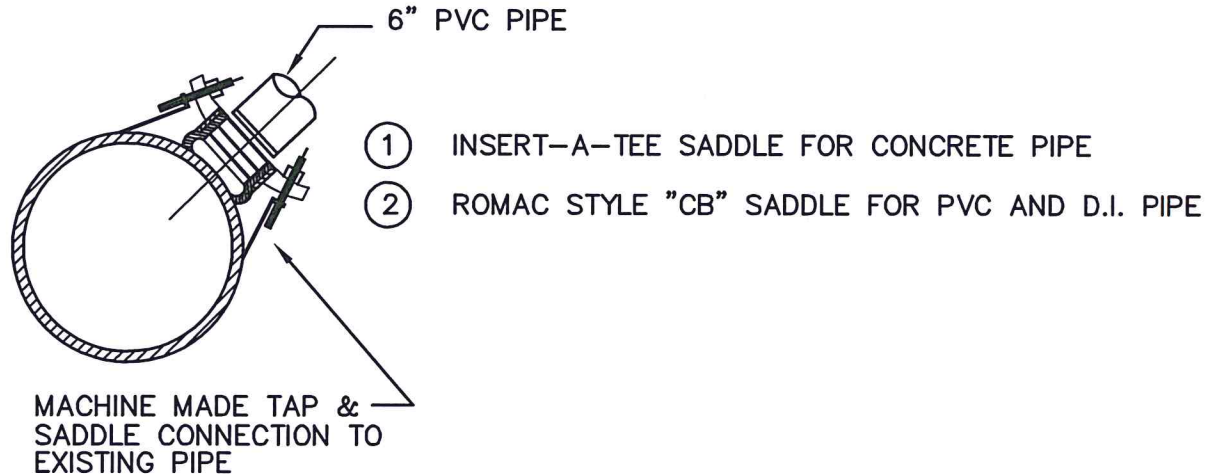
CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE S11
STANDARD SIDE SEWER CONNECTION



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CONSULTING ENGINEERS

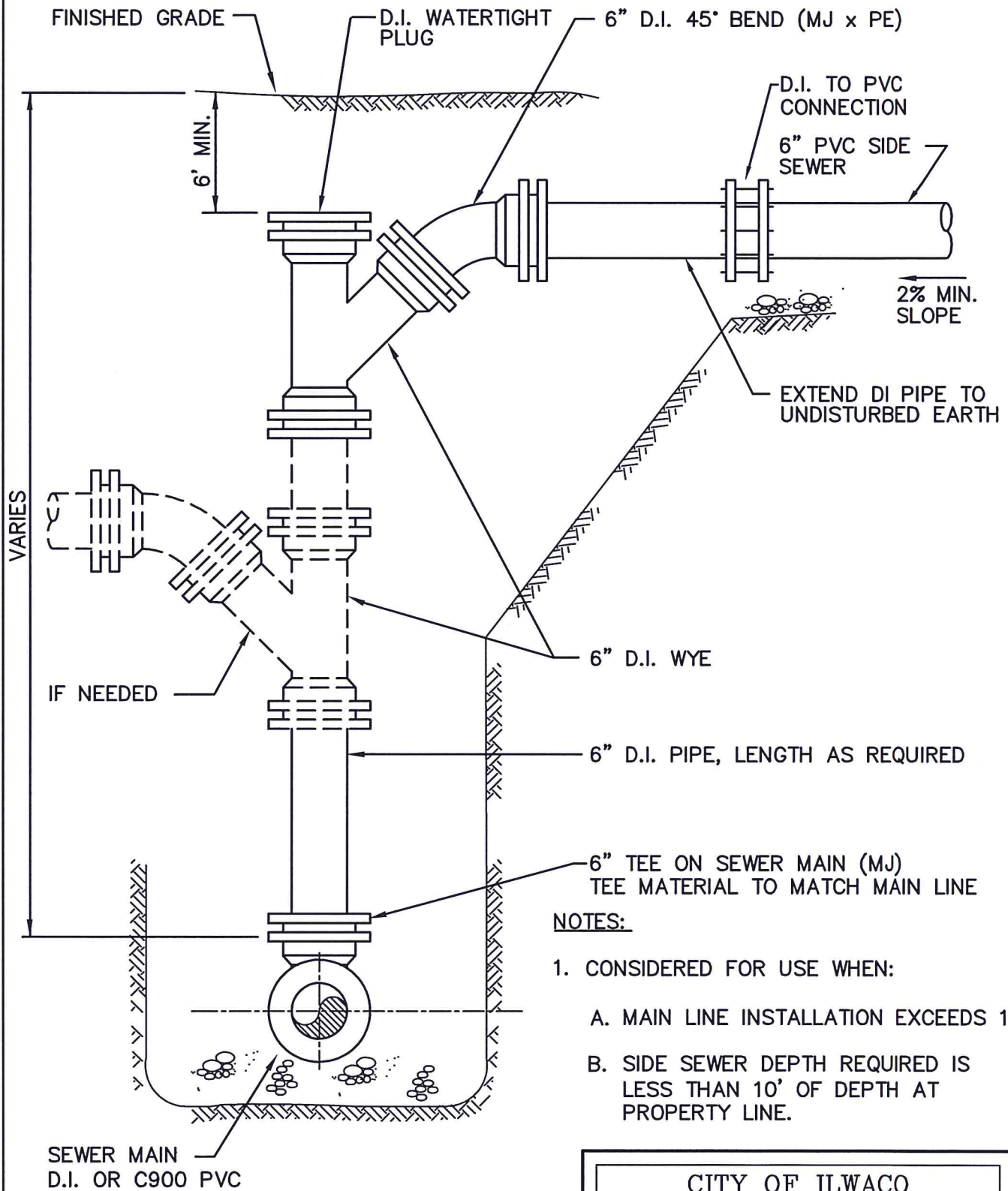
**PAINT EXPOSED PORTION OF SERVICE
MARKER WITH WHITE PAINT. STENCIL "SEWER"
AND TOTAL LENGTH OF 2x4 USING 2" HIGH
BLACK LETTERS. LOCATE SERVICE MARKER
AT END OF EACH SERVICE.**



1. SEE STANDARD SIDE SEWER DETAIL V-S11 FOR NEW CONSTRUCTION.
2. DEVELOPER TO PROVIDE ALL MATERIALS, TRAFFIC CONTROL, PERMITS, SHORING AND MISC. WORK AS REQUIRED TO TAP THE MAIN AND INSTALL THE SIDE SEWER.
3. CUT-IN TEES ARE PERMITTED WITH CITY APPROVAL.



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CONSULTING ENGINEERS



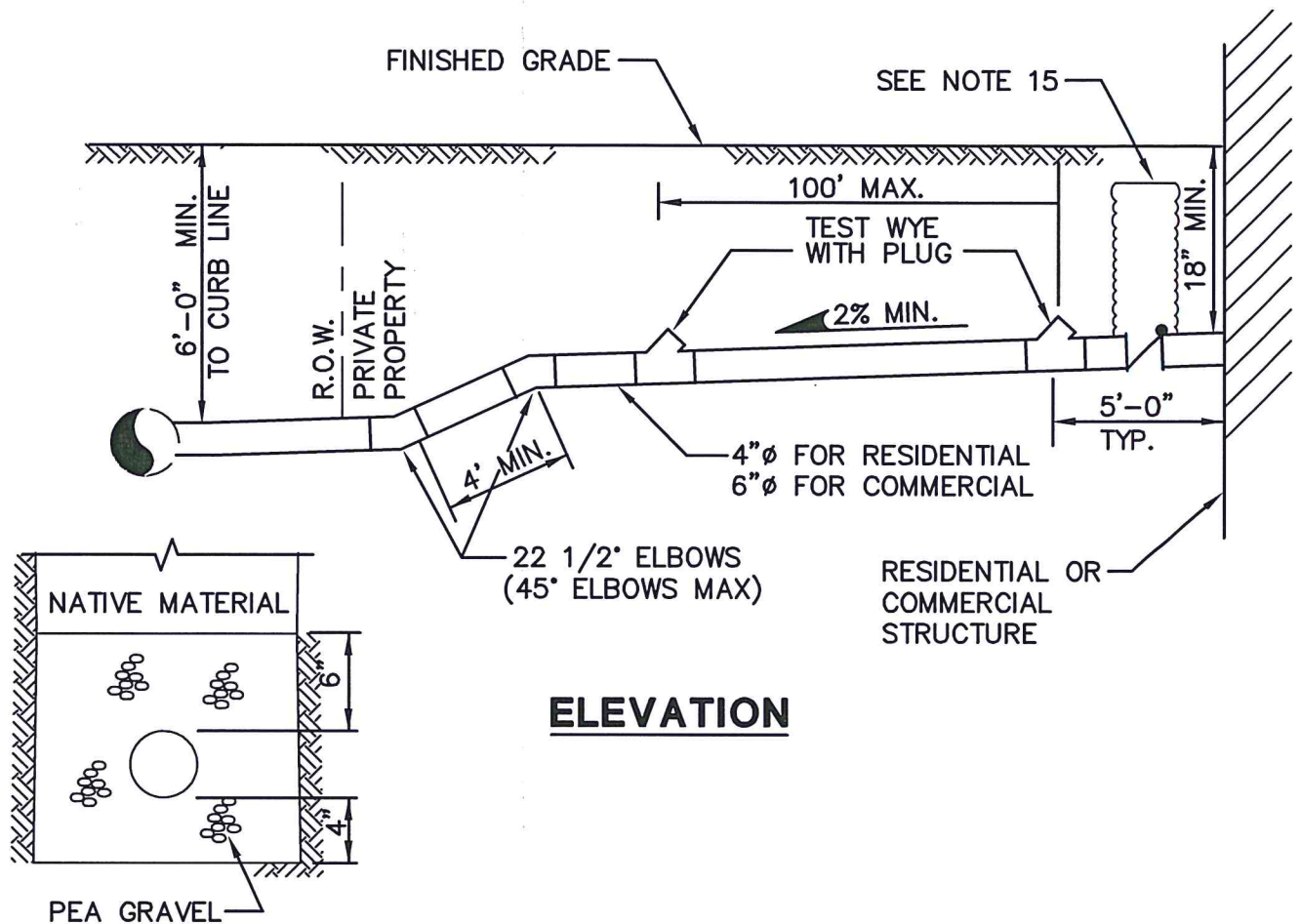
NOTES:

1. CONSIDERED FOR USE WHEN:
 - A. MAIN LINE INSTALLATION EXCEEDS 18'.
 - B. SIDE SEWER DEPTH REQUIRED IS LESS THAN 10' OF DEPTH AT PROPERTY LINE.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE S13
STANDING SIDE SEWER


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CONSULTING ENGINEERS



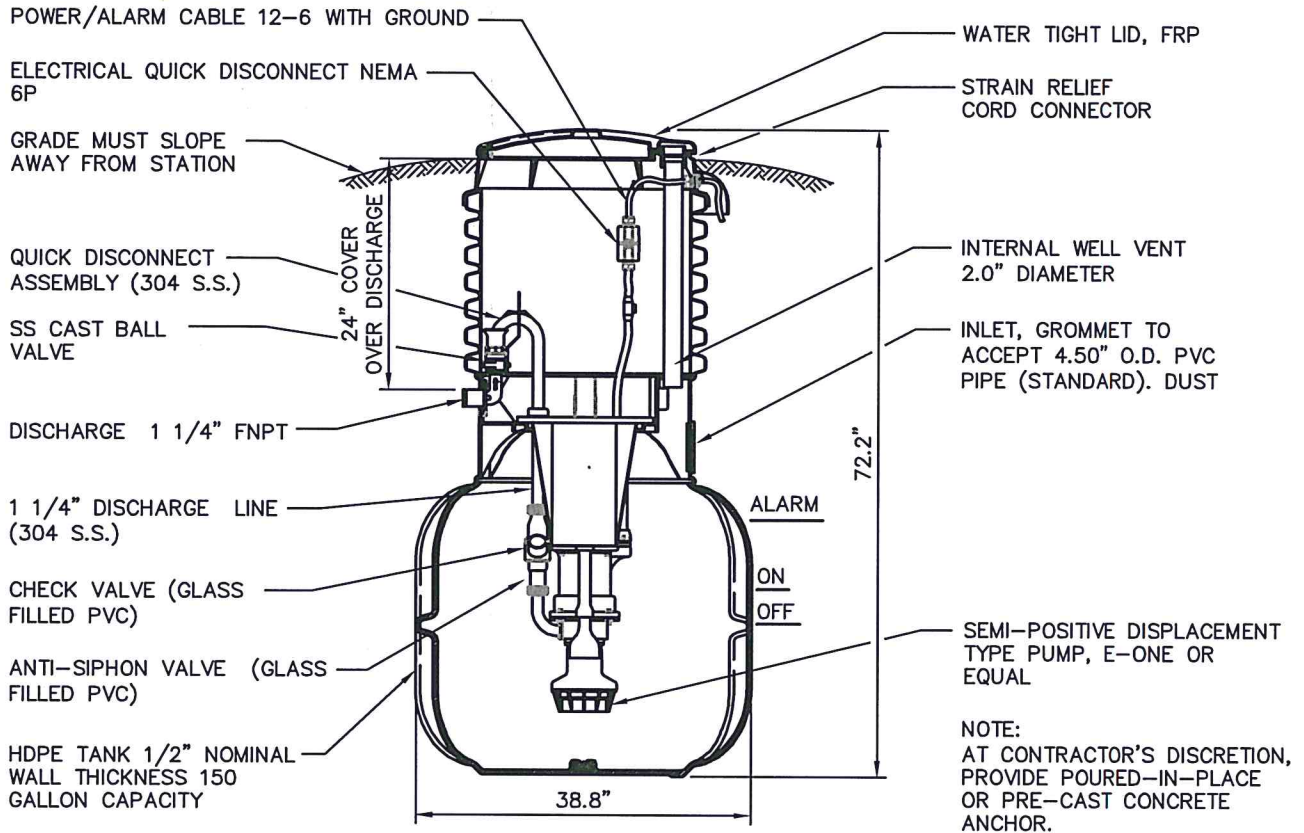
TRENCH SECTION

NOTES:

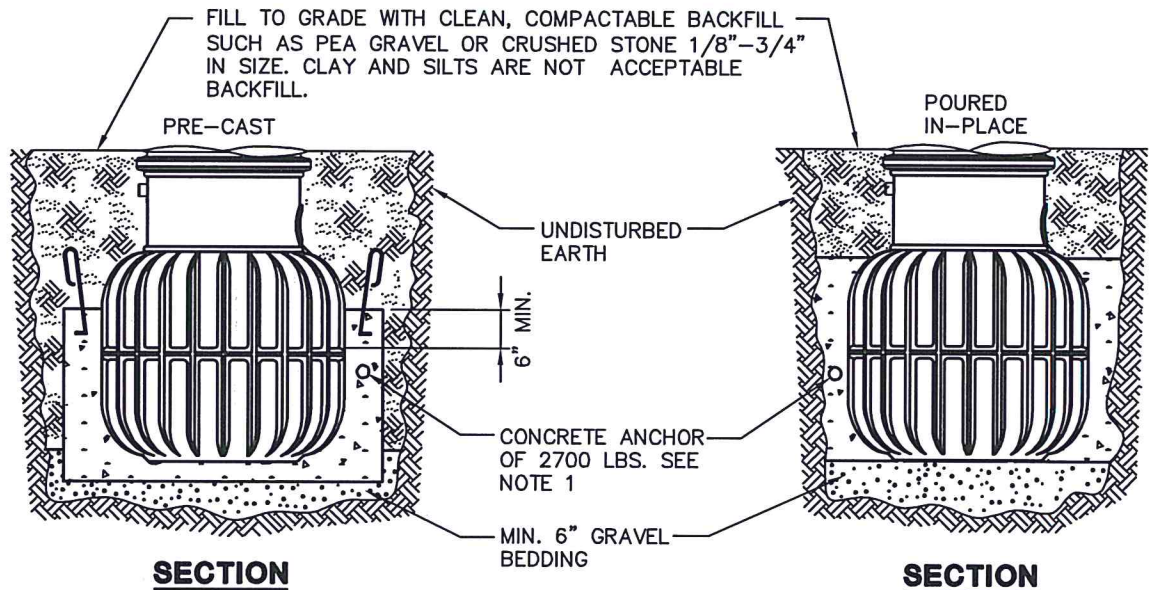
- ELBOWS SHALL NOT BE GREATER THAN 45°. MINIMUM DISTANCE BETWEEN BENDS SHALL BE 4'.
- CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'
- BACKFILL FOR PAVED AREA SHALL BE 5/8" MINUS CRUSHED SURFACING TOP COURSE, COMPACTED IN 12" LIFTS
- ALL PLUMBING OUTLETS SHALL BE CONNECTED TO THE SEWER. NO DOWNSPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
- 18" MINIMUM COVERAGE OVER PRIVATE SIDE SEWER.
- LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH AN ELBOW OR WYE. 90° CHANGE SHALL BE ELBOW AND WYE.
- 4" SEWER PIPE MINIMUM SIZE ON PRIVATE RESIDENTIAL PROPERTY. 6" SEWER PIPE MIN. SIZE ON COMMERCIAL PROPERTIES. 2% MINIMUM GRADE, 100% MAXIMUM (45°).
- ALL CONSTRUCTION REQUIRES A PERMIT AND PAYMENT OF FEE, COMPLETE LEGAL DESCRIPTION OF PROPERTY AND DIMENSIONS.
- AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER IN RELATION TO THE HOUSE IS REQUIRED AFTER INSTALLATION.
- SEE V-S11, V-S12, AND V-S13 FOR SIDE SEWER LATERAL REQUIREMENTS.
- CONSTRUCTION IN RIGHT-OF-WAY SHALL BE PERFORMED BY A REGISTERED LICENSED CONTRACTOR.
- RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION.
- PRE-TREATMENT SYSTEMS REQUIRE DESIGN SUBMITTAL STAMPED BY LICENSED ENGINEER.
- PIPE TO BE BEDDED WITH 3/4" MINUS CRUSHED GRAVEL TO LIMITS SHOWN. COMPACT BEDDING BELOW, ON SIDES AND ON TOP OF PIPE.
- INSTALL SURFACE ACCESSIBLE BACKWATER VALVE ON ALL SIDE SEWERS WHERE POTENTIAL OCCURS FOR FLOW TO BACK INTO THE PRIVATE SERVICE.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S14PRIVATE SIDE SEWER
INSTALLATION


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CONSULTING ENGINEERS

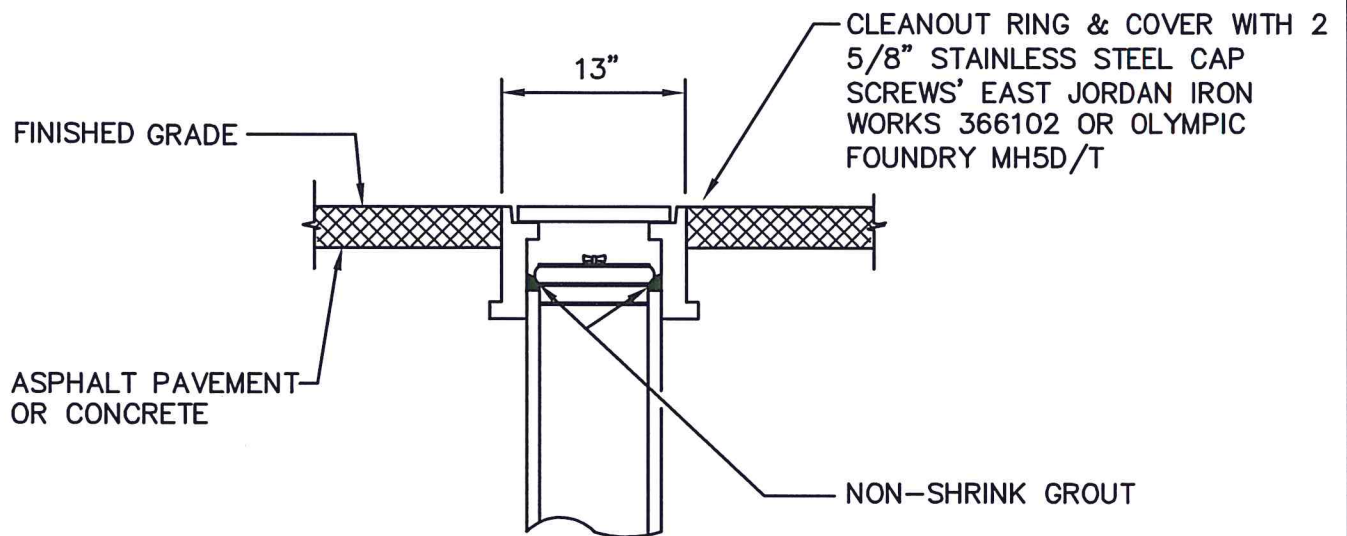


INTERIOR SECTION

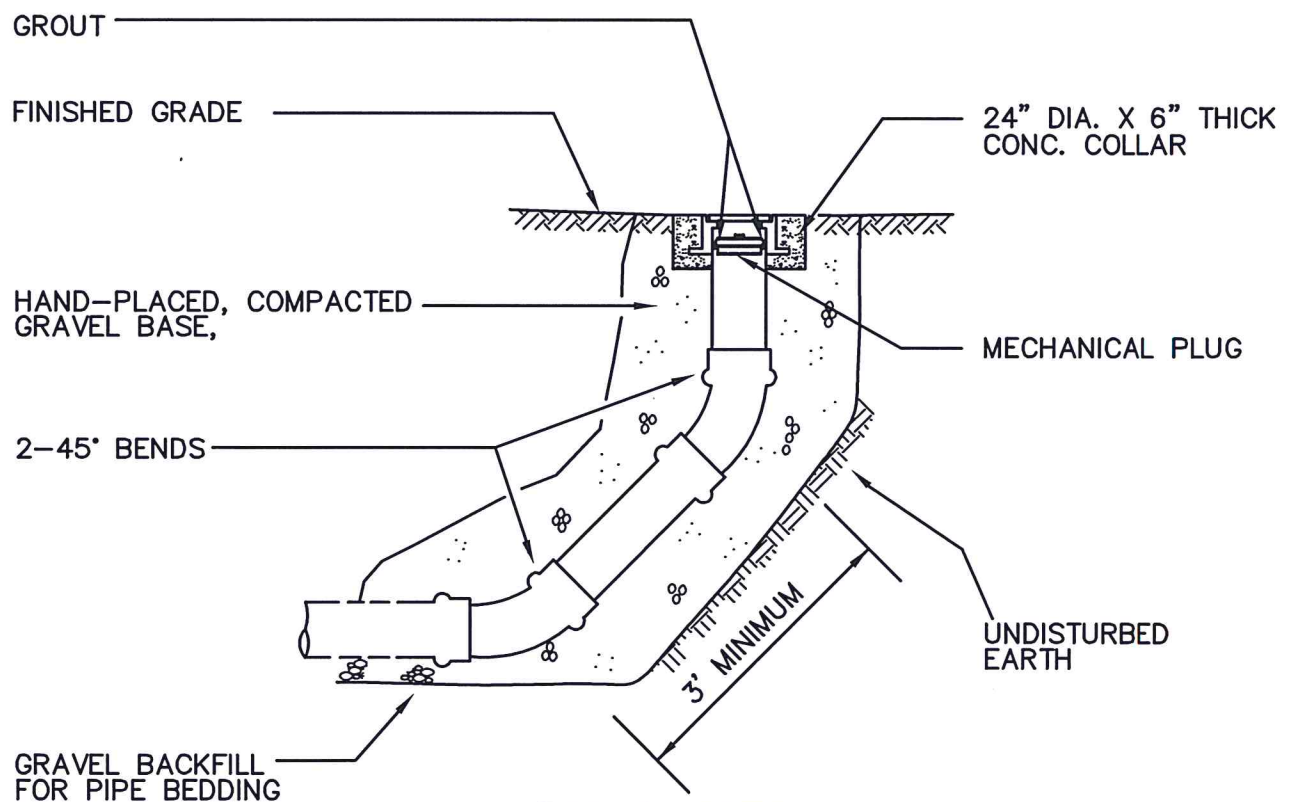


CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S15
PRIVATE GRINDER PUMP INSTALLATION


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PAVED



NON-PAVED

NOTES:

1. TO BE USED ON CLEANOUT ACCESS AT STRUCTURE

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE S16
SIDE SEWER CLEANOUT


Gray & Osborne, Inc.
CONSULTING ENGINEERS

FINISHED GRADE

IMPORTED COMPACTED BACKFILL. EXCAVATED MATERIAL, GRAVEL BASE, OR CDF ALLOWED WITH ENGINEER APPROVAL. (COMPACTION REQUIREMENTS PER MODIFIED PROCTOR ASTM D1557 AND AS REQUIRED BY PERMITS.)

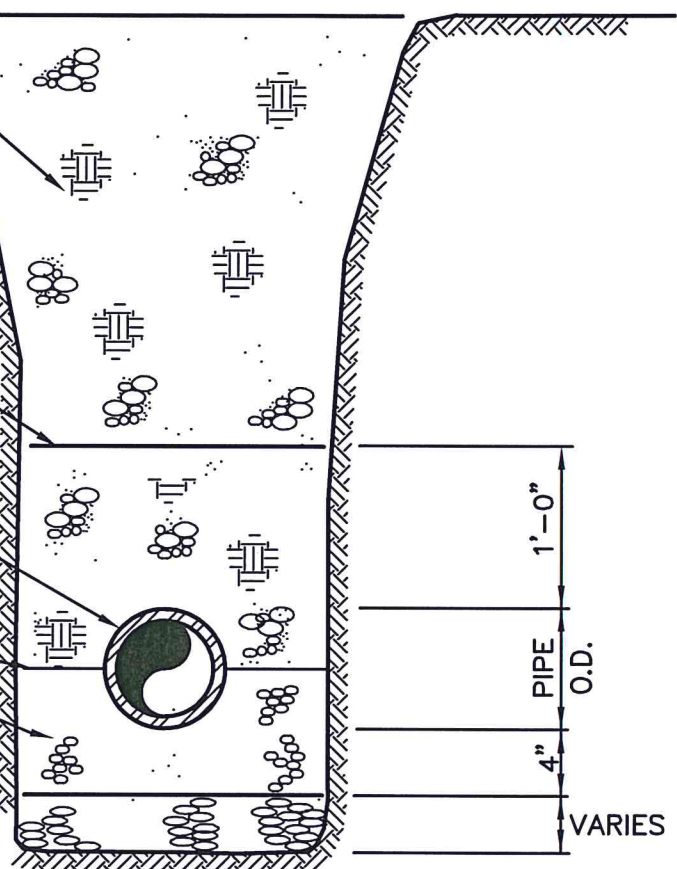
SPECIAL PRECAUTIONS TO PROTECT PIPE TO THIS LEVEL

DUCTILE IRON PIPE CLASS 52, EPOXY LINED

SPRING LINE

PIPE BEDDING 3/4-MINUS COMPACTED TO OBTAIN COMPACTION REQUIREMENTS PER MODIFIED PROCTOR ASTM D1557 AND AS REQUIRED BY PERMITS.

FOUNDATION GRAVEL AS REQUIRED

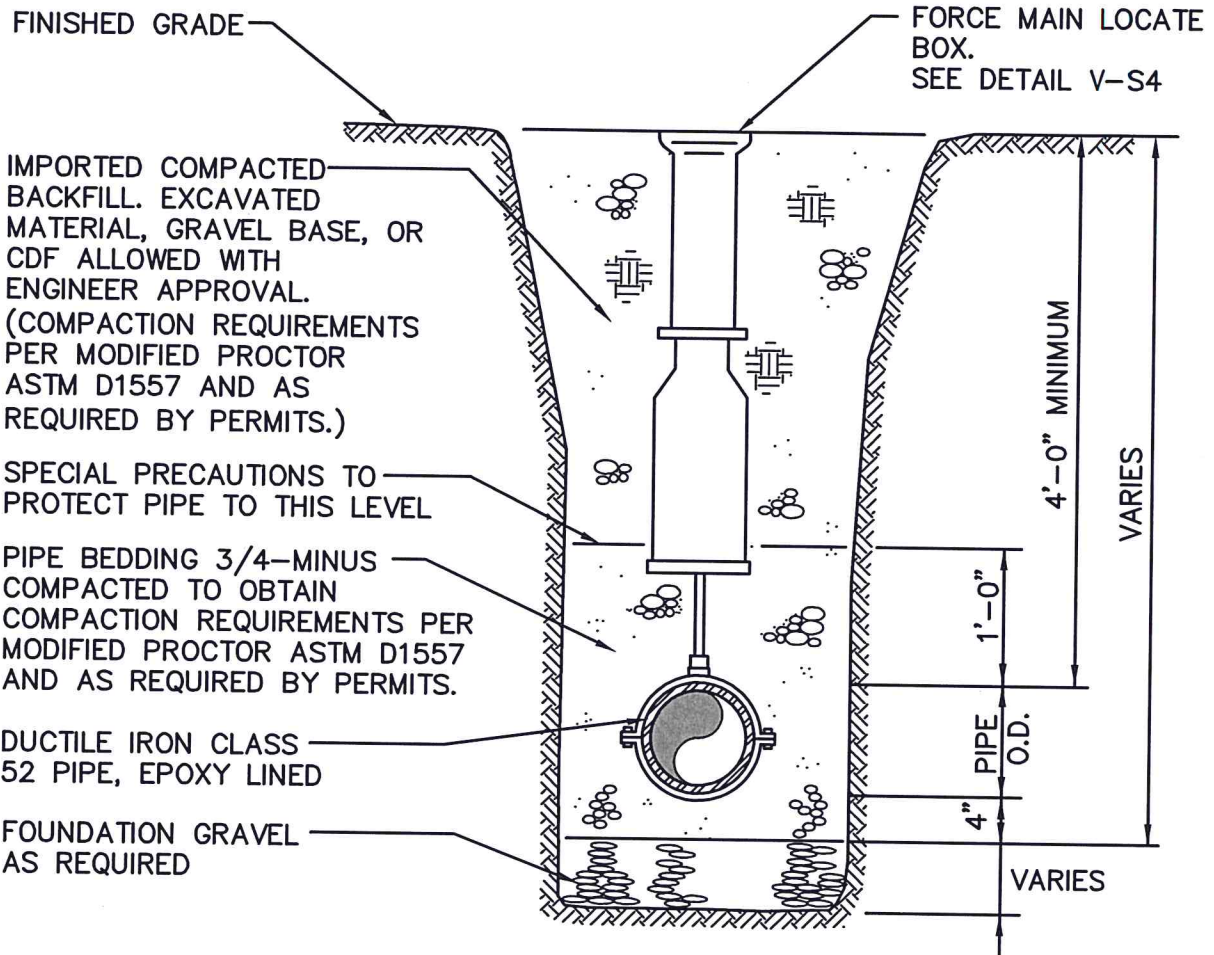


NOTES:

1. BACKFILL MATERIAL AND COMPACTION SHALL BE ON BOTTOM, SIDES AND TOP OF PIPE AND SHALL BE IN CONFORMANCE WITH CITY OF SEQUIM STANDARDS AND/OR COUNTY, CITY, STATE PERMIT REQUIREMENTS.
2. PIPES SHALL BE RESTRAINED IN FILL OR PREVIOUSLY DISTURBED MATERIAL.
3. CLAY OR BENTONITE DAMS SHALL BE INSTALLED ACROSS THE TRENCH AND TO THE FULL DEPTH OF THE GRANULAR MATERIAL IN ALL AREAS OF STEEP SLOPES, STREAM CROSSINGS AND WETLAND TO PREVENT MIGRATION OF WATER ALONG THE PIPELINE.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S2
SANITARY SEWER TRENCH SECTION
(D.I./GRAVITY)


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CONSULTING ENGINEERS

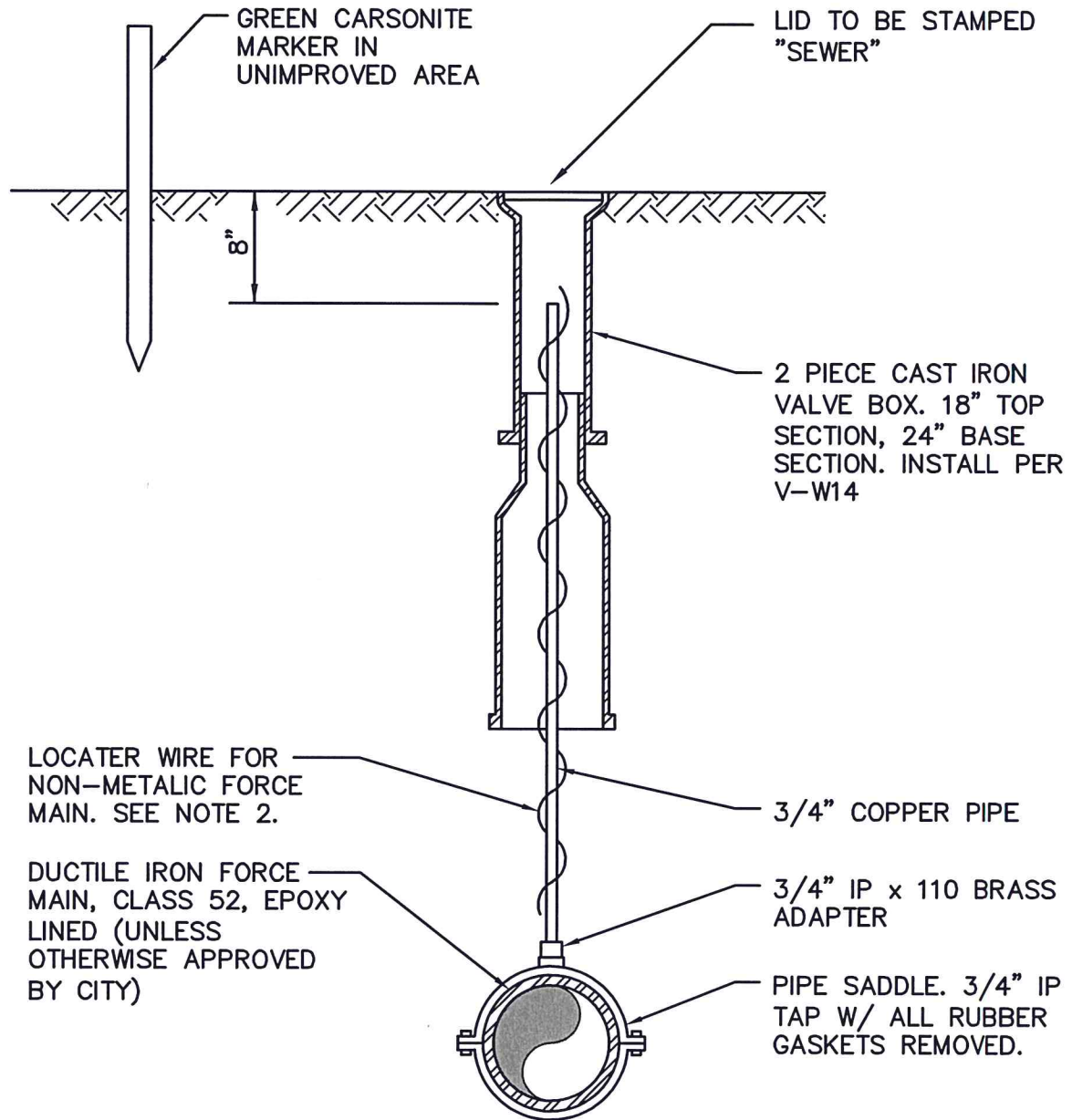


NOTES:

1. BACKFILL MATERIAL AND COMPACTION SHALL BE ON BOTTOM, SIDES AND TOP OF PIPE AND SHALL BE IN CONFORMANCE WITH CITY OF SEQUIM STANDARDS AND/OR THE CLALLAM COUNTY, CITY AND/OR STATE PERMIT REQUIREMENTS.
2. ONLY DUCTILE IRON PIPE SHALL BE USED UNLESS APPROVED BY THE CITY.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S3A
SANITARY SEWER TRENCH SECTION
(FORCE MAIN)


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NOTES:

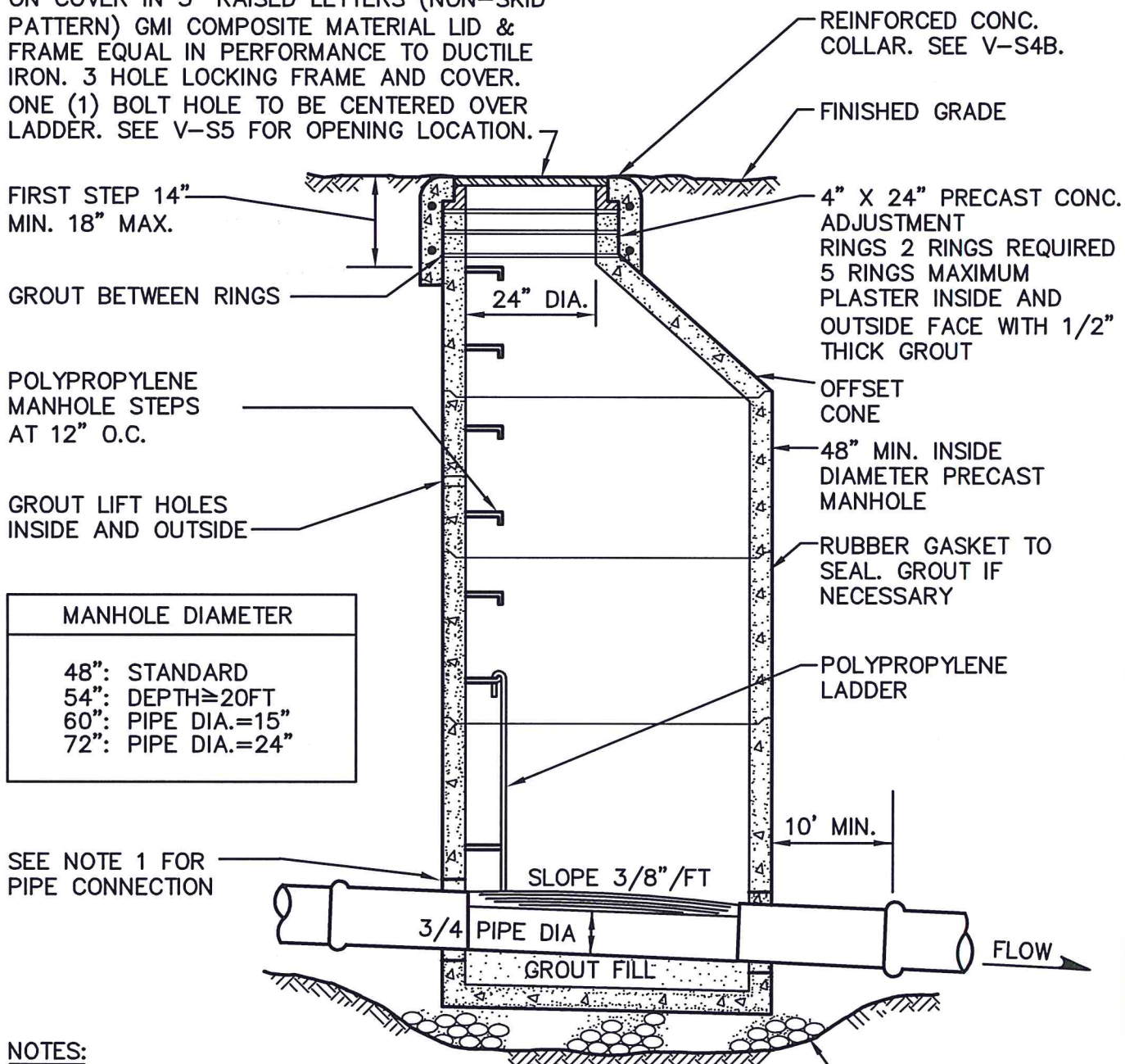
1. LOCATE AT ENDS OF FORCE MAINS, ALL HORIZONTAL BENDS AND AT 300 FT. MAX SPACING, OR AS REQUIRED BY CITY
2. ON NON-METALIC FORCE MAINS, PROVIDE 12 GAUGE COATED COPPER WIRE BETWEEN LOCATION BOXES. WRAP ALONG FORCE MAIN PIPE AND UP COPPER PIPE AT EACH END.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE S3B
FORCE MAIN LOCATION BOX


Gray & Osborne, Inc.
CONSULTING ENGINEERS

MANHOLE FRAME & COVER WITH "SEWER" CAST ON COVER IN 3" RAISED LETTERS (NON-SKID PATTERN) GMI COMPOSITE MATERIAL LID & FRAME EQUAL IN PERFORMANCE TO DUCTILE IRON. 3 HOLE LOCKING FRAME AND COVER. ONE (1) BOLT HOLE TO BE CENTERED OVER LADDER. SEE V-S5 FOR OPENING LOCATION.

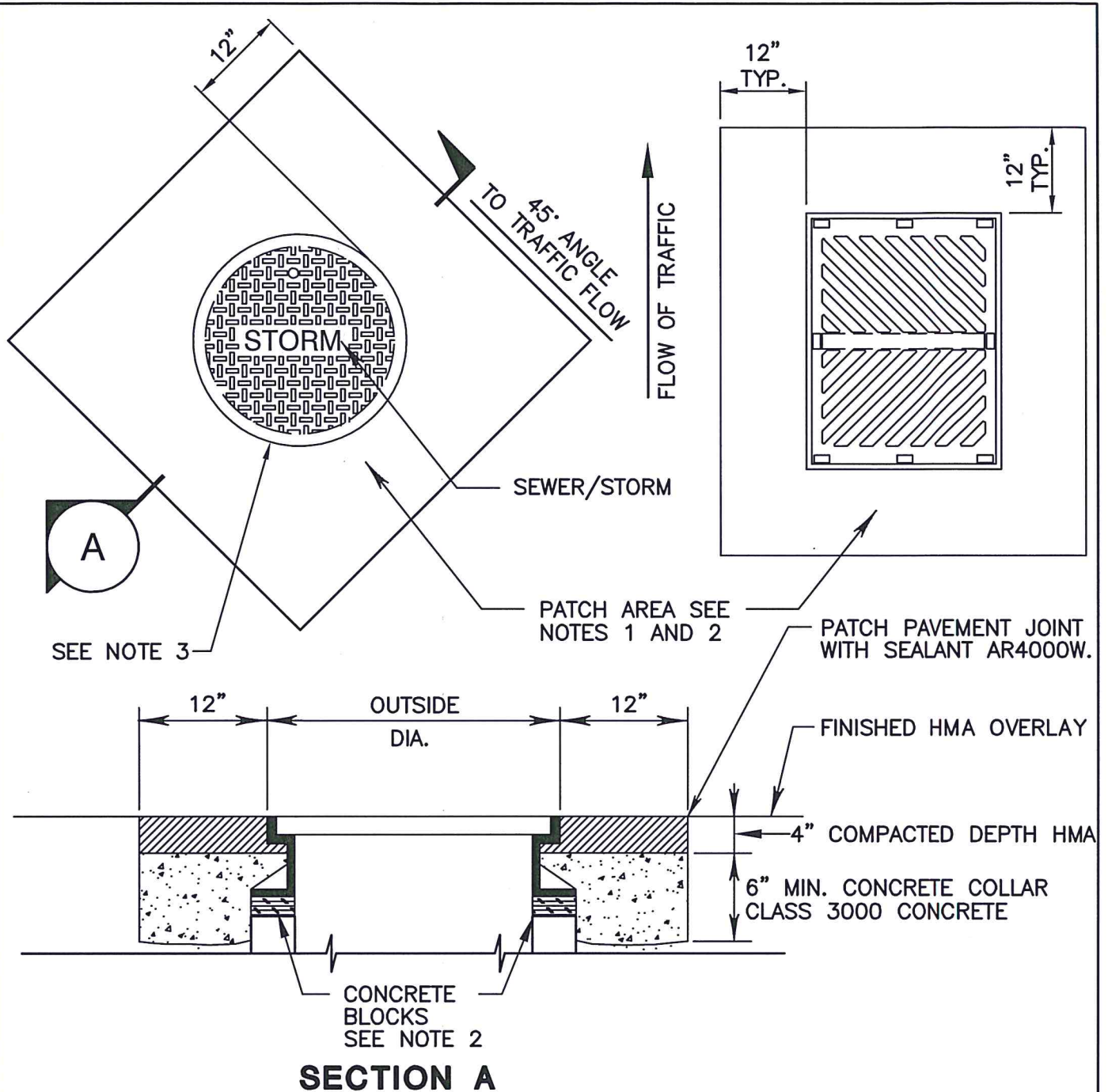


NOTES:

1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
PVC PIPE: CAST OR GROUT A SAND COLLAR INTO WALL.
D.I. OR PVC PIPE: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH EPDM MODEL "C" OR "L" LINK SEAL.
2. DROP OF GRADE THRU MANHOLE SHALL BE 0.10', UNLESS OTHERWISE NOTED.
3. MINIMUM DEPTH OF MANHOLE SHALL BE 8' UNLESS APPROVED BY THE CITY.
4. INSTALL GREEN CARSONITE FIBERGLASS MANHOLE MARKERS IN EASEMENTS.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S4A
SANITARY SEWER MANHOLE SECTION


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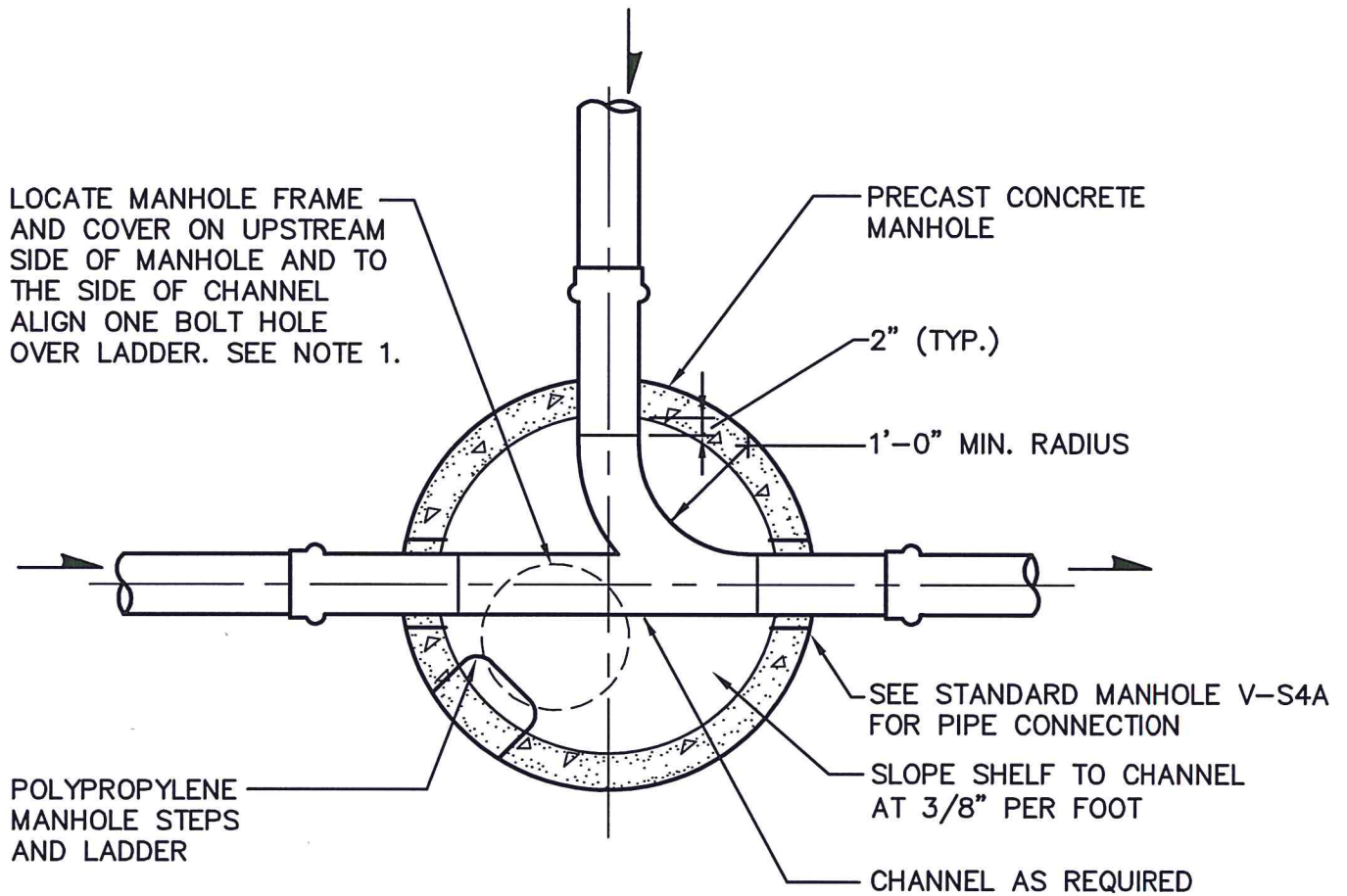
NOTES:

1. REMOVE PAVEMENT AND BASE MATERIALS WITHIN THE PATCH AREA AS DETAILED. ADJUST CASTING FRAME TO NEW PAVEMENT SURFACE USING CONCRETE BLOCKS & CONCRETE GROUT.
2. 2"x4"x8" SOLID BRICK USED FOR FINAL ADJUSTMENT TO GRADE. 6" HIGH MAX.
3. CONTRACTOR SHALL FURNISH AND INSTALL COMPOSITE MANHOLE COVERS (GMI COMPOSITE OR CONTRACTING AGENCY APPROVED EQUAL) ON ALL EXISTING SEWER/STORM MANHOLES. BOLT TO EXISTING COLLAR. PROVIDE EXISTING LID TO CONTRACTING AGENCY.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE S4B
MANHOLE PAVING DETAIL


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NOTES:

1. CONFIRM FRAME AND COVER LOCATION WITH CITY.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S5
SANITARY SEWER MANHOLE PLAN


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CONSULTING ENGINEERS

REINFORCED
CONCRETE COLLAR
SEE V-S4B

COVER, SEE V-S4A FOR DETAILS

FINISHED GRADE

CUT EXISTING PIPE AT
SPRING LINE. CHANNEL,
PER CITY STANDARDS
AFTER NEW LINE IS
ACCEPTED.

CAST IN PLACE
CHANNEL & SHELF,
3000# PSI
CONCRETE

BRICK UP IN MINIMUM
OF 5 LOCATIONS TO
SUPPORT MANHOLE.

12" MINIMUM

FLOW

MIN. 8"

FOUNDATION GRAVEL

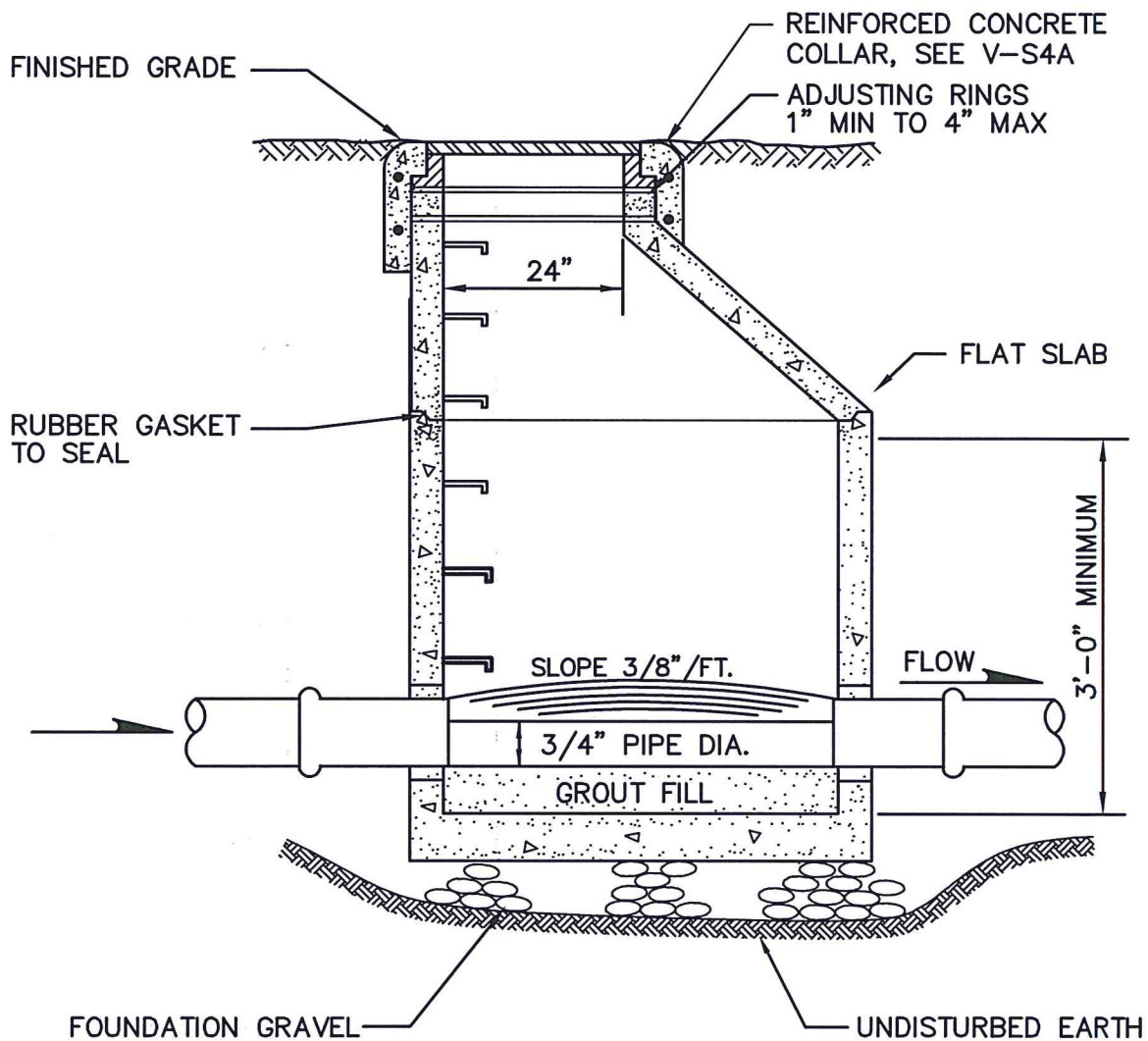
UNDISTURBED EARTH

NOTES:

1. SEE STANDARD MANHOLE FOR
ADDITIONAL CALLOUTS ON V-S4A

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S6
SANITARY SEWER SADDLE MANHOLE


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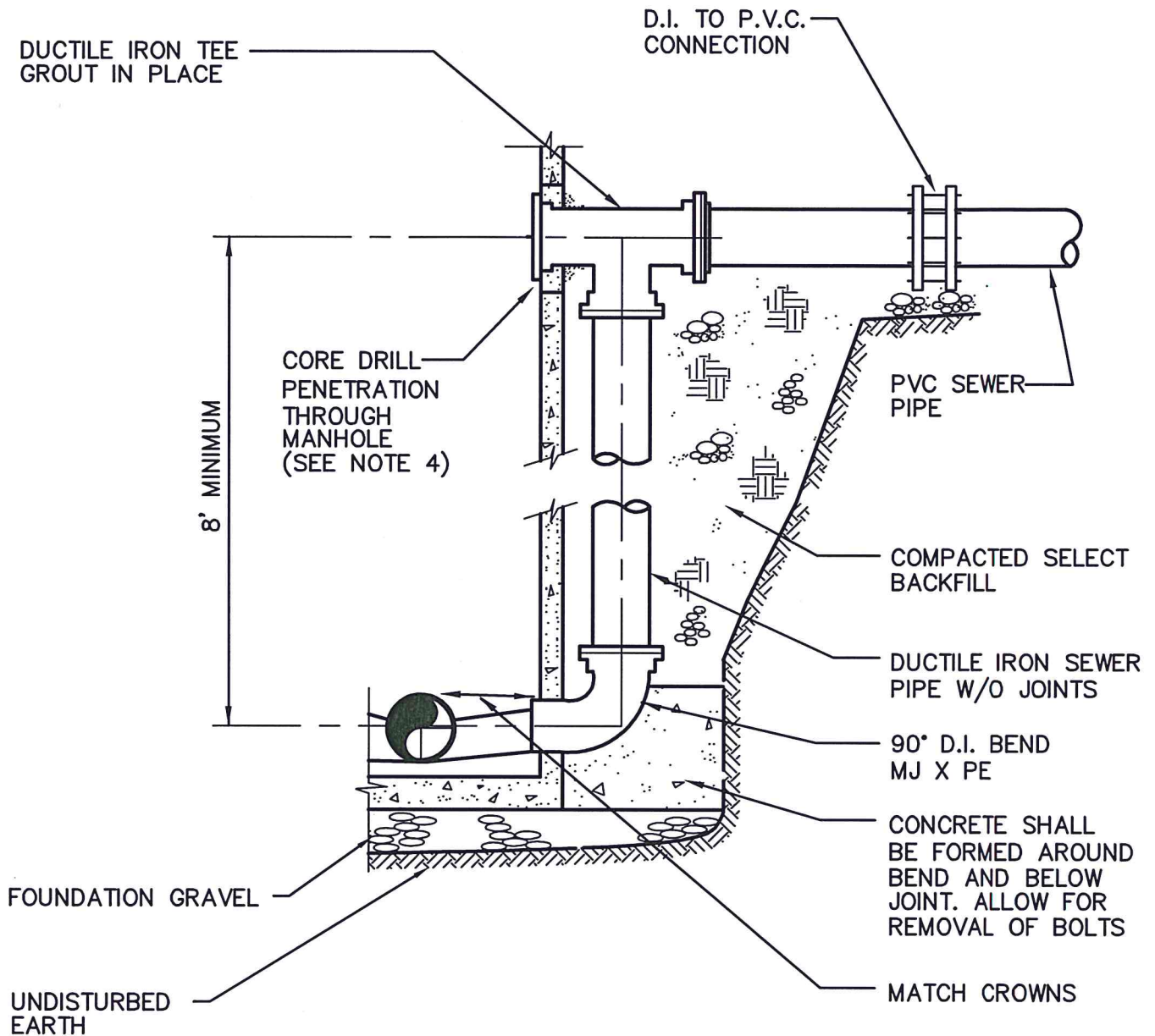


NOTES:

1. SEE STANDARD MANHOLE CALLOUTS ON V-S4A AND V-S5.
2. FRAME AND COVER SHALL MEET REQUIREMENTS FOR 24" MANHOLE.
3. USE OF SHALLOW MANHOLE REQUIRES CITY APPROVAL PRIOR TO INSTALLATION.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S7
SANITARY SEWER SHALLOW MANHOLE


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CONSULTING ENGINEERS

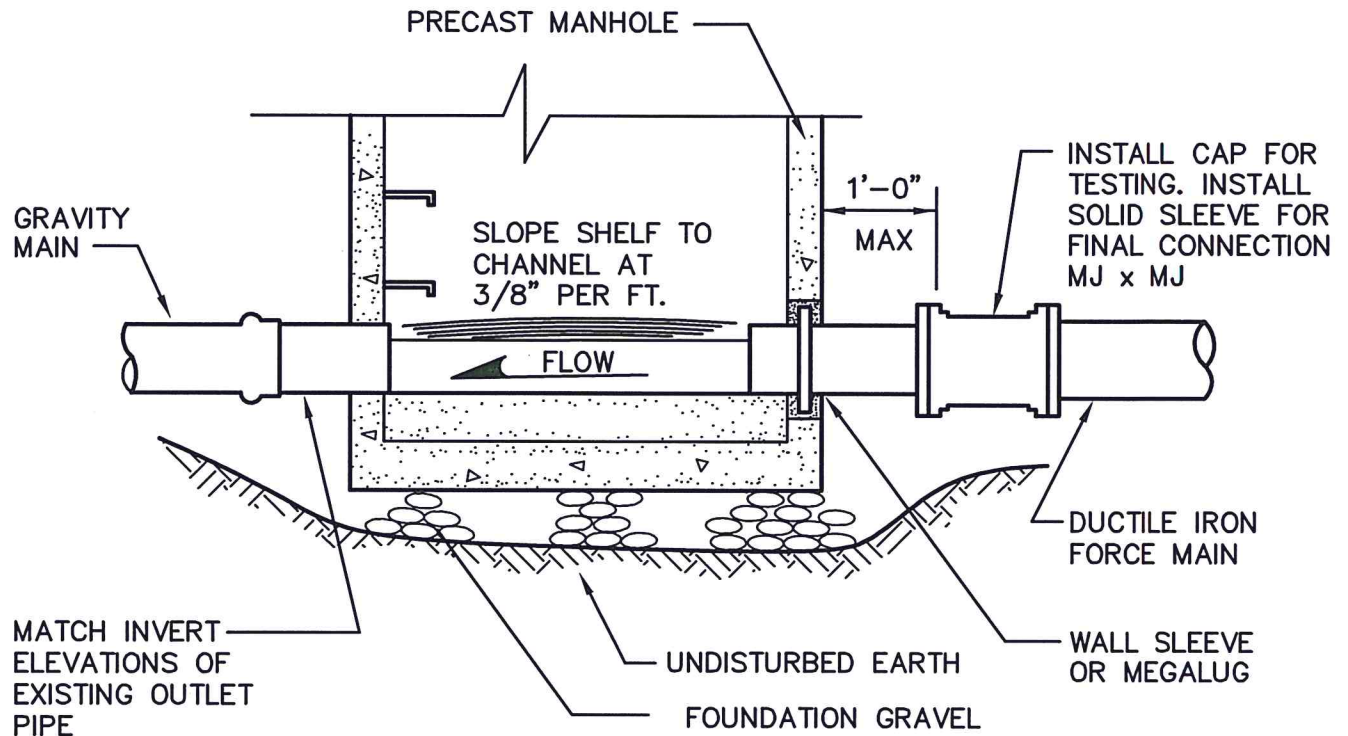


NOTES:

1. USE OF DROP MANHOLE REQUIRES CITY APPROVAL PRIOR TO INSTALLATION.
2. DROP HEIGHT MUST BE GREATER THAN 8 FEET FOR CONSIDERATION.
3. DROP CONNECTIONS WILL ONLY BE CONSIDERED AT JUNCTIONS WITH AN EXISTING DEEP MAIN FOR LATERAL SEWERS TO BE BUILT IN THE FUTURE.
4. EPDM MODEL "C" OR "L" LINK SEAL.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S8
OUTSIDE DROP MANHOLE


Gray & Osborne, Inc.
CONSULTING ENGINEERS



NOTES:

1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS: PVC PIPE: CAST OR GROUT A SAND COLLAR INTO WALL. D.I. OR PVC PIPE: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH EPDM MODEL "C" OR "L" LINK SEAL EXCEPT FOR FORCE MAIN CONNECTION.
2. DROP OF GRADE THROUGH MANHOLE SHALL BE 0.10', UNLESS OTHERWISE NOTED.
3. ALIGN FORCE MAIN DISCHARGE AXIS WITH OUTLET PIPE.
4. RESTRAIN FORCE MAIN JOINTS AND FITTINGS IN ACCORDANCE WITH V-G3.
5. SEE STANDARD MANHOLE CALLOUTS ON V-S4A AND V-S5.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE S9
FORCE MAIN DISCHARGE MANHOLE


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FINISHED GRADE

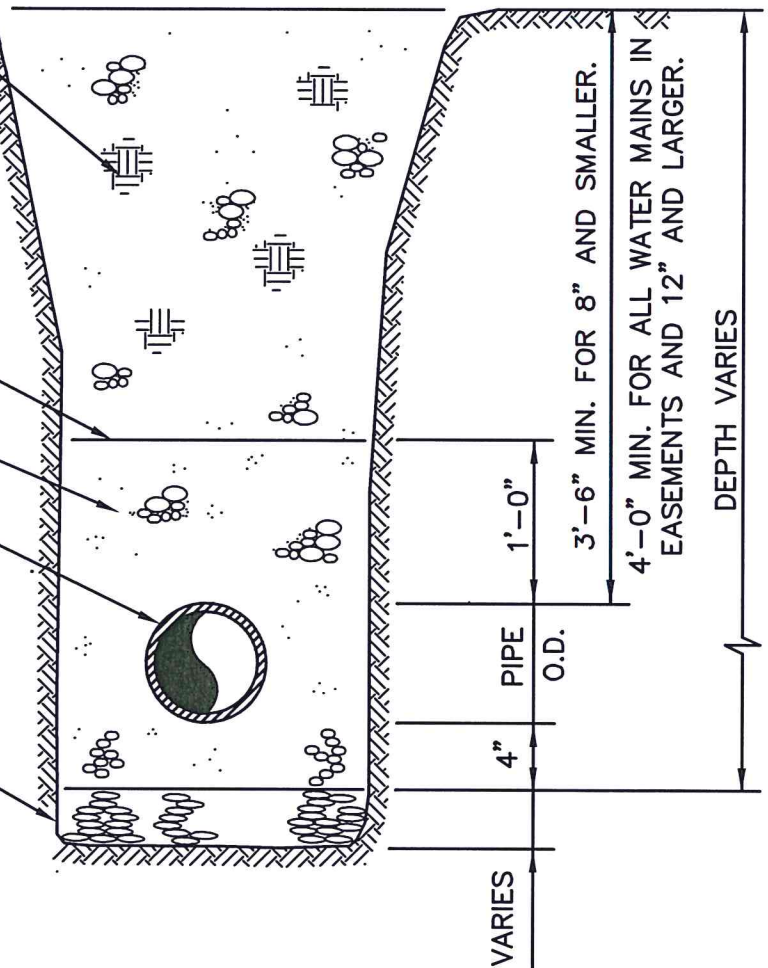
IMPORTED COMPACTED BACKFILL.
EXCAVATED MATERIAL, GRAVEL
BASE, OR CDF ALLOWED WITH
ENGINEER'S APPROVAL.
COMPACTION REQUIREMENTS PER
MODIFIED PROCTOR ASTM D1557
AS REQUIRED BY PERMITS

SPECIAL PRECAUTIONS TO
PROTECT PIPE TO THIS LEVEL

COMPACTED SELECT BACKFILL

DUCTILE IRON PIPE CLASS 52
OR PVC PIPE CLASS C900

FOUNDATION GRAVEL
AS REQUIRED



NOTE:

1. BACKFILL MATERIAL AND COMPACTION SHALL BE IN CONFORMANCE WITH WSDOT STANDARDS AND/OR COUNTY, CITY, STATE PERMIT REQUIREMENTS.
2. DEPTH OF COVER IN EXCESS OF 7- FEET REQUIRES CITY APPROVAL.
3. PIPES SHALL BE RESTRAINED IN FILL OR PREVIOUSLY DISTURBED MATERIAL.
4. CLAY OR BENTONITE DAMS SHALL BE INSTALLED ACROSS THE TRENCH AND TO THE FULL DEPTH OF THE GRANULAR MATERIAL IN ALL AREAS OF STEEP SLOPES, STREAM CROSSINGS AND WETLAND TO PREVENT MIGRATION OF WATER ALONG THE PIPELINE.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W1
WATER MAIN TRENCH SECTION


Gray & Osborne, Inc.
CONSULTING ENGINEERS

MEGALUG FOLLOWER INSTALLED ON
INFLOW SIDE OF VAULT WITH CONCRETE
THRUST BLOCK

2 HATCHES IN 3'x 6' OPENING

4" BRICK, GROUTED

WATER
MAIN

INSTALL
RW GV AT
WATER MAIN
CONNECTION

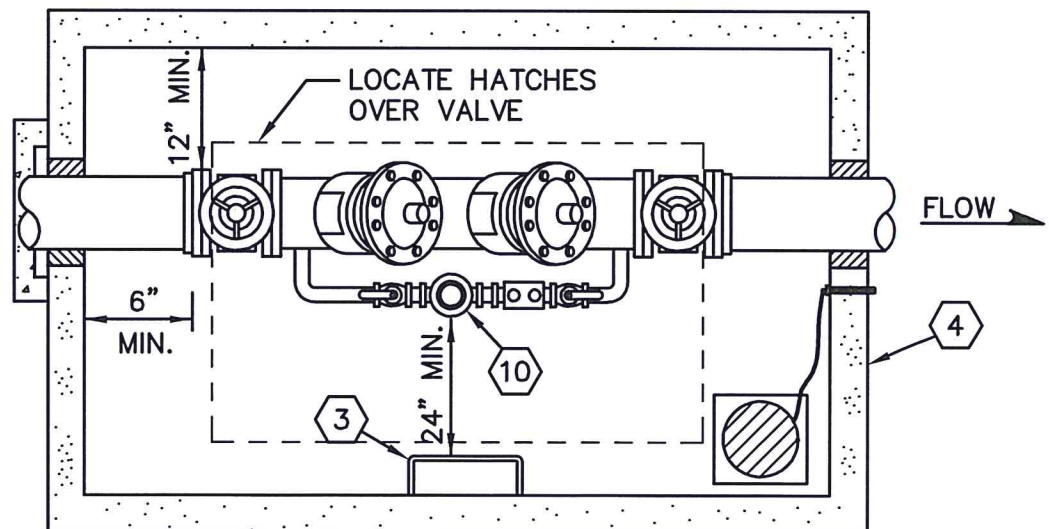
RESTRAINED
PIPE & FITTINGS

24"
LOWER MAIN TO
FIT VAULT PIPE

FLOW

ELEVATION

SUMP IF REQUIRED
BY CITY



PLAN

NOTES:

1. SEE V-W13B FOR NOTES AND CALLOUTS

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE W13A
DOUBLE-CHECK DETECTOR ASSEMBLY,
4" AND LARGER


Gray & Osborne, Inc.
CONSULTING ENGINEERS

LEGEND - SEE V-W13A FOR ELEVATION AND PLAN

① WASHINGTON STATE APPROVED DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) WITH OS&Y RESILIENT SEAT GATE VALVE EA. END AND LOW FLOW BYPASS METER ASSEMBLY.

② UNI-FLANGE WITH SET SCREWS.

③ GALVANIZED STEEL OR ALUMINUM LADDER, SECURED TO VAULT, SAME SIDE AS BYPASS METER.

④ **VAULT:**

UTILITY VAULT CO, OR APPROVED EQUAL WITH 4" BRICK AND ADJUSTABLE COVER.

ACCESS HATCHES:

3'x3', LW PRODUCTS, H-20 LOAD RATED. PROVIDE DRAINS FROM HATCHES TO VAULT FLOOR.

DCDA SIZE	UTILITY VAULT CO APPROVED MODEL	MINIMUM I/S VAULT DIM. L X W X H			MIN. HATCH OPENING
4"	4484-LA	8'-4"	4'-4"	6'-2"	3' X 6'
6"	4484-LA	8'-4"	4'-4"	6'-2"	3' X 6'
8"	5106-LA	10'-6"	5'-0"	6'-2"	3' X 6'
10"	612-LA	12'-0"	6'-0"	6'-6"	3' X 6'

⑤ EPDM MODEL "C" OR "L" LINK SEAL.

⑥ DRAIN TO NEAREST CATCH BASIN. MINIMUM SLOPE 1% UNLESS OTHERWISE APPROVED. WHERE GRAVITY DRAIN IS NOT FEASIBLE, PROVIDE SUMP AND ELECTRIC PUMP WITH DISCHARGE TO SURFACE DRAIN. PUMP SHALL BE 1/2 HP ZOELLER M-53, WITH CHECK VALVE ON DISCHARGE LINE. POWER FROM SERVED FACILITY WITH GFI OUTLET IN VAULT, LOCATED ABOVE METER.

⑦ STANDON S-89 OR EQUAL ADJUSTABLE PIPE SUPPORTS, BOLT TO VALVE FLANGE.

⑧ VALVE ASSEMBLY TO BE POSITIONED IN VAULT TO ALLOW STEMS TO EXTEND INTO ACCESS OPENING.

⑨ CL. 52 D.I., MJ WITH MEGALUGS.

⑩ LOW FLOW BYPASS METER, INCLUDING 5/8" x 3/4" SENSUS RADIO READ WATER METER W/ SENSUS AMR AND MXU RADIO UNIT, WASHINGTON STATE APPROVED DOUBLE CHECK VALVE ASSEMBLY (DCVA) AND 2 BRONZE BODY ISOLATION BALL VALVES, BRASS OR TYPE K COPPER PIPING.

⑪ SIMPLEX DEDICATED RECEPTACLE IN A CAST ALUMINUM BOX WITH IN SERVICE COVER. RECEPTACLE SHALL BE ORANGE. INCLUDE SIGN STATING "DEDICATED 120V, 1PH, FOR SUMP PUMP."

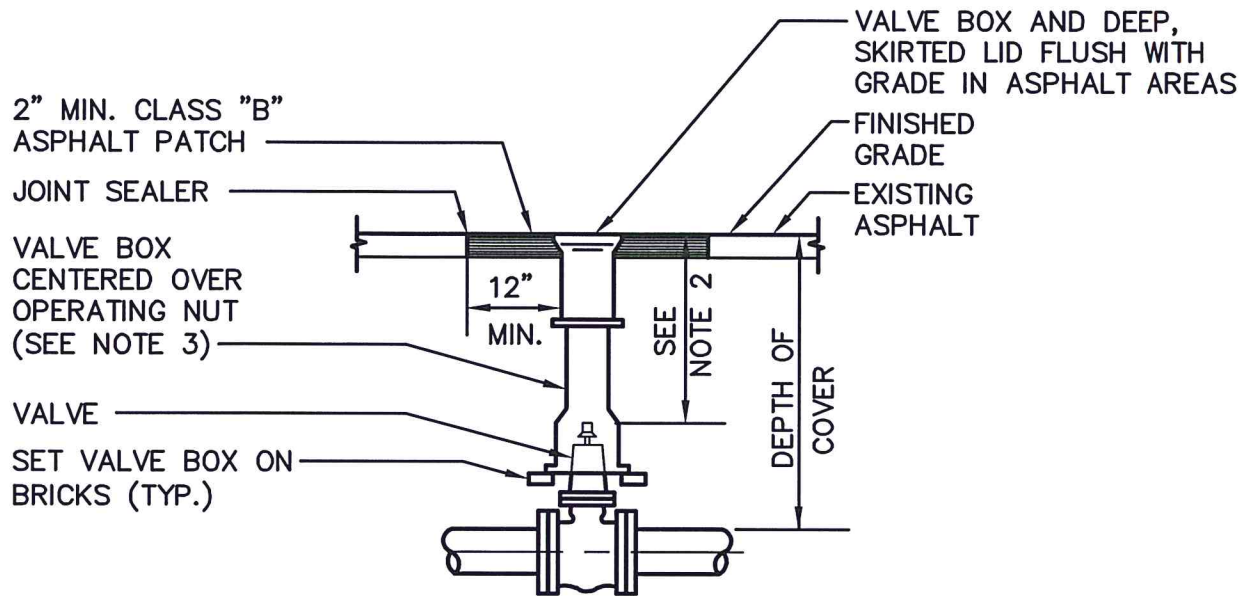
⑫ 3/4" PVC SCH-40, CONDUIT SHALL BE COMPLETELY SEALED 120V, UNDER GROUND. CONTRACTOR TO SEAL CONDUIT PENETRATION WITH NON-SHRINK GROUT.

NOTES:

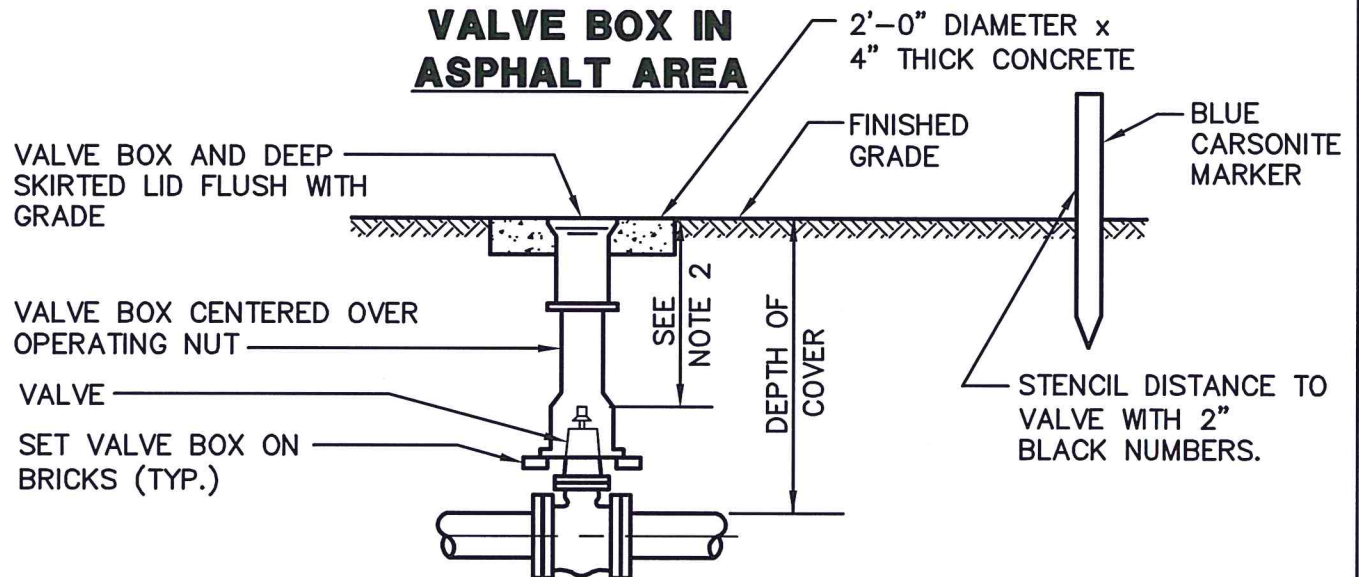
1. VAULT SHALL BE LOCATED OUTDOORS AND ACCESSIBLE TO DISTRICT. ALTERNATE TO VAULT INSTALLATION REQUIRES CITY APPROVAL.
2. SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL DCDA IS APPROVED BY THE CITY AND TESTED/CERTIFIED BY A WASHINGTON STATE LICENSED TESTER.
3. DCDA IS CONSIDERED PART OF THE PRIVATE SYSTEM AND SHALL BE MAINTAINED BY THE PROPERTY OWNER WITH ANNUAL CERTIFICATION REQUIRED.
4. PRESSURE TEST AND DISINFECT PER A.W.W.A. STANDARDS.
5. NO BRANCH CONNECTIONS ALLOWED BETWEEN METER AND DCDA.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE W13B
DOUBLE-CHECK DETECTOR ASSEMBLY,
4" AND LARGER


Gray & Osborne, Inc.
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VALVE BOX IN ASPHALT AREA



VALVE BOX IN UNIMPROVED AREA (VALVE MARKER REQUIRED)

NOTES:

1. EACH VALVE SHALL BE PROVIDED WITH AN ADJUSTABLE CAST IRON VALVE BOX OF 5 INCHES (5") INSIDE DIAMETER. VALVE BOXES SHALL HAVE A TOP SECTION WITH AN EIGHTEEN INCH (18") MIN. LENGTH. THE VALVE BOX SHALL BE OLYMPIC FOUNDARY No. 940 OR APPROVED EQUAL.
2. 18" MINIMUM, 24" MAXIMUM FOR OPERATOR NUT IF EXTENSION IS REQUIRED.
3. VALVE BOX EARS SHALL BE PLACED IN LINE WITH THE PIPE IT SERVES.

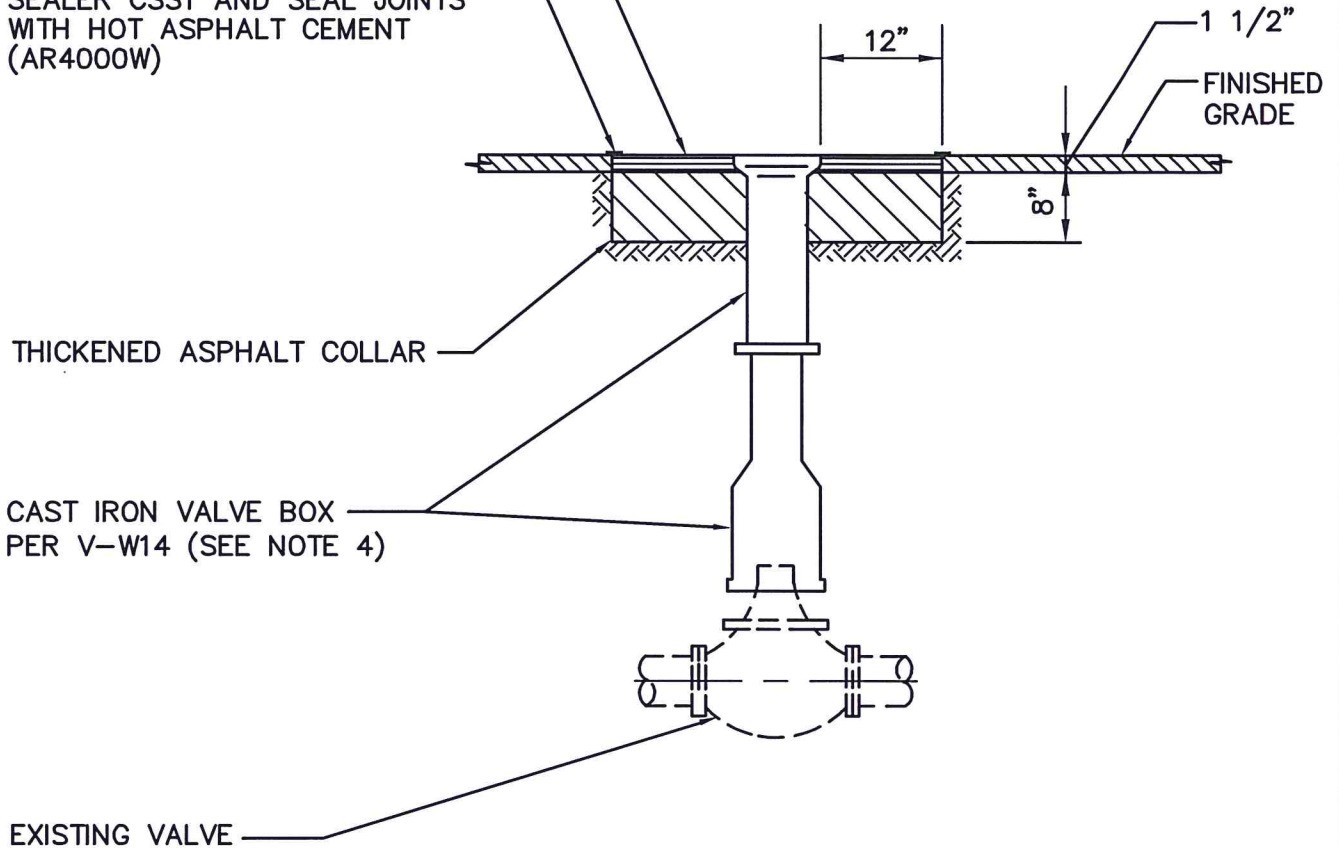
CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W14
VALVE BOX


Gray & Osborne, Inc.
CONSULTING ENGINEERS

1 1/2" COMPACTED THICKNESS
PG 58-22 HMA.

CLEAN AND TACK EDGES WITH
SEALER CSS1 AND SEAL JOINTS
WITH HOT ASPHALT CEMENT
(AR4000W)



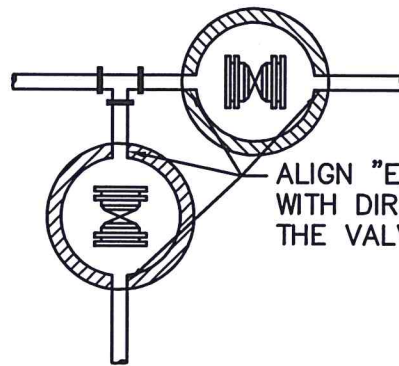
NOTES:

1. ALL EXISTING CONCRETE VALVE BOXES SHALL BE REPLACED WITH CAST IRON BOXES AND ADJUSTED WITH SOIL PIPE TO GRADE AS NEEDED.
2. ALL EXISTING CAST IRON VALVE BOXES SHALL BE ADJUSTED TO GRADE OR NEW CAST IRON BOXES INSTALLED.
3. ALIGNMENT OF THE VALVE BOX SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND CARE SHALL BE TAKEN TO ENSURE THAT THE VALVE IS OPERABLE.
4. VALVE BOX EARS SHALL BE PLACED IN LINE WITH THE PIPE IT SERVES.

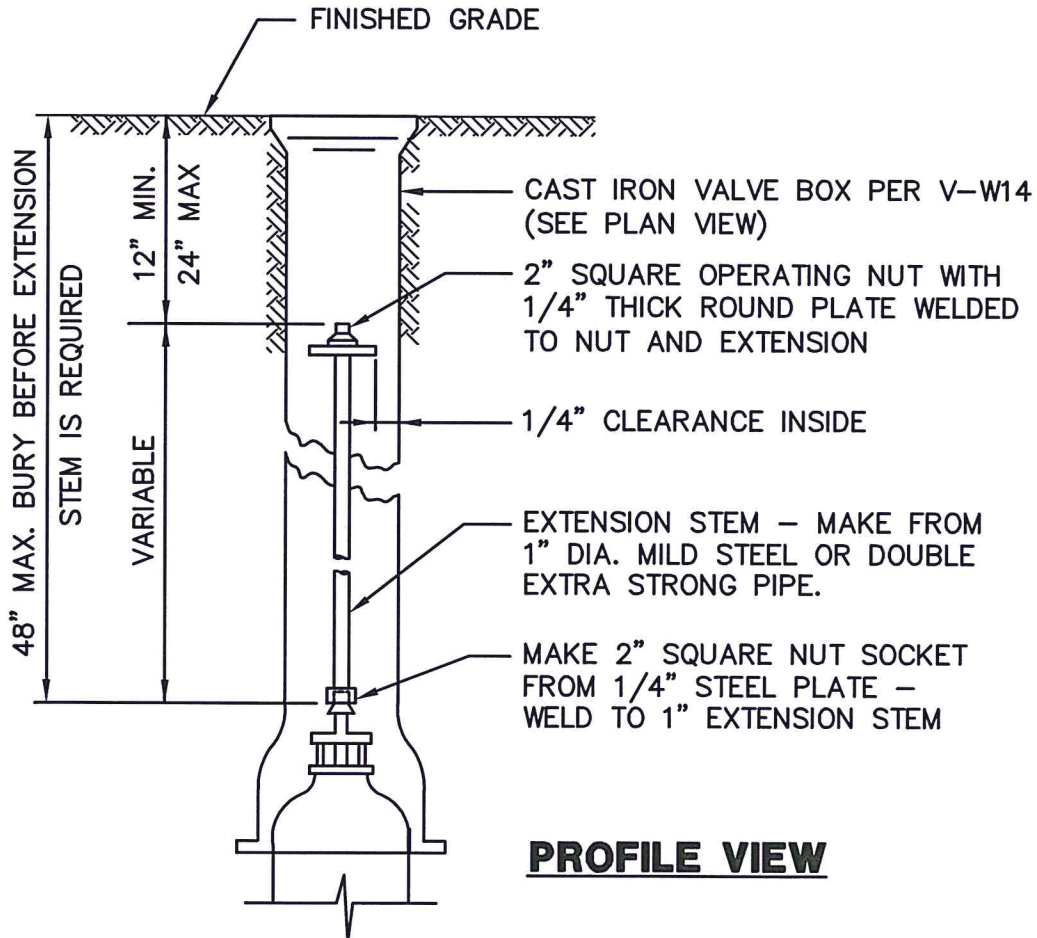
CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W15
VALVE BOX ADJUSTMENT


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PLAN VIEW

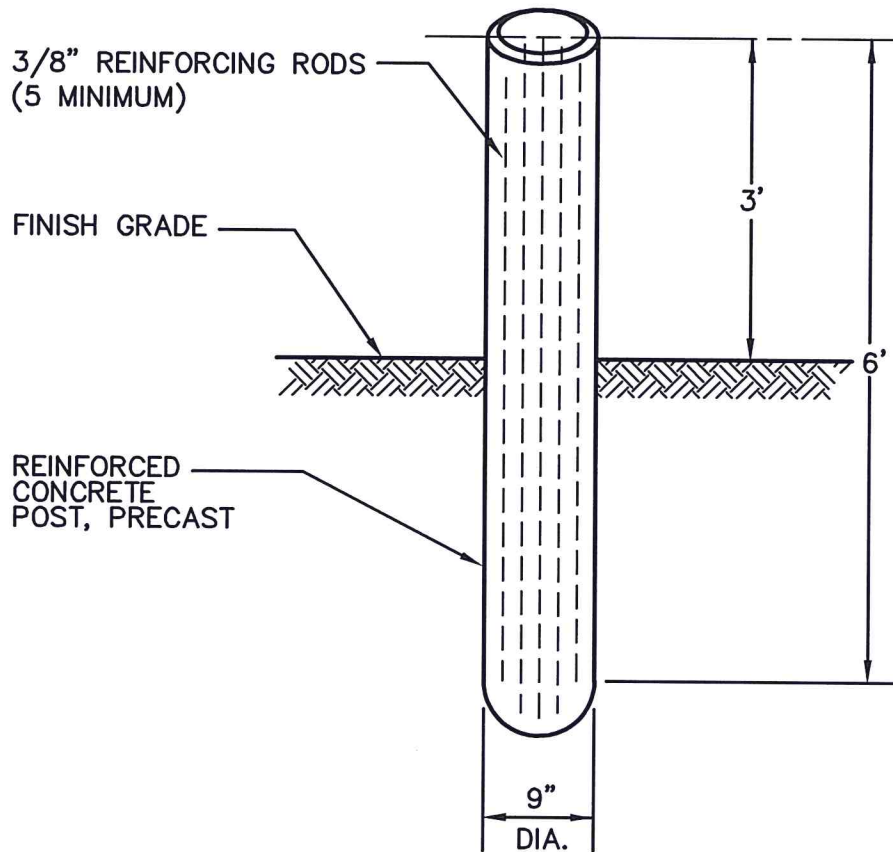


PROFILE VIEW

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W16
VALVE EXTENSION STEM


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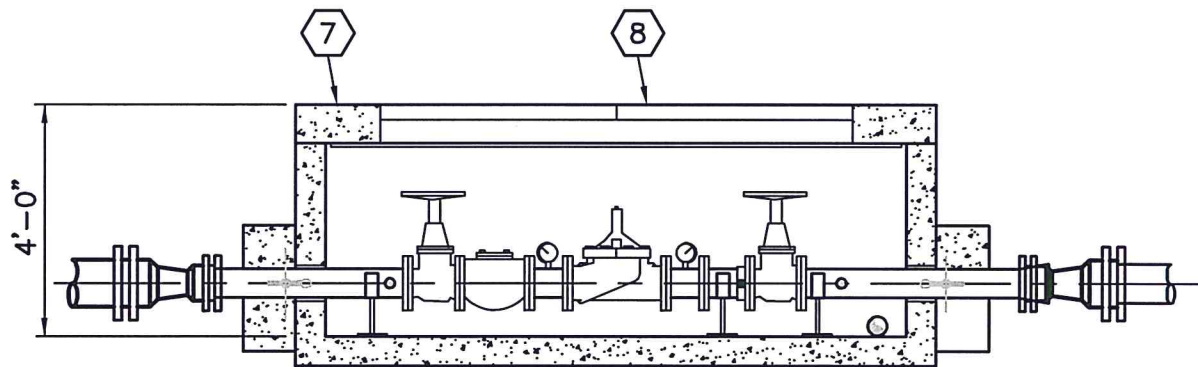
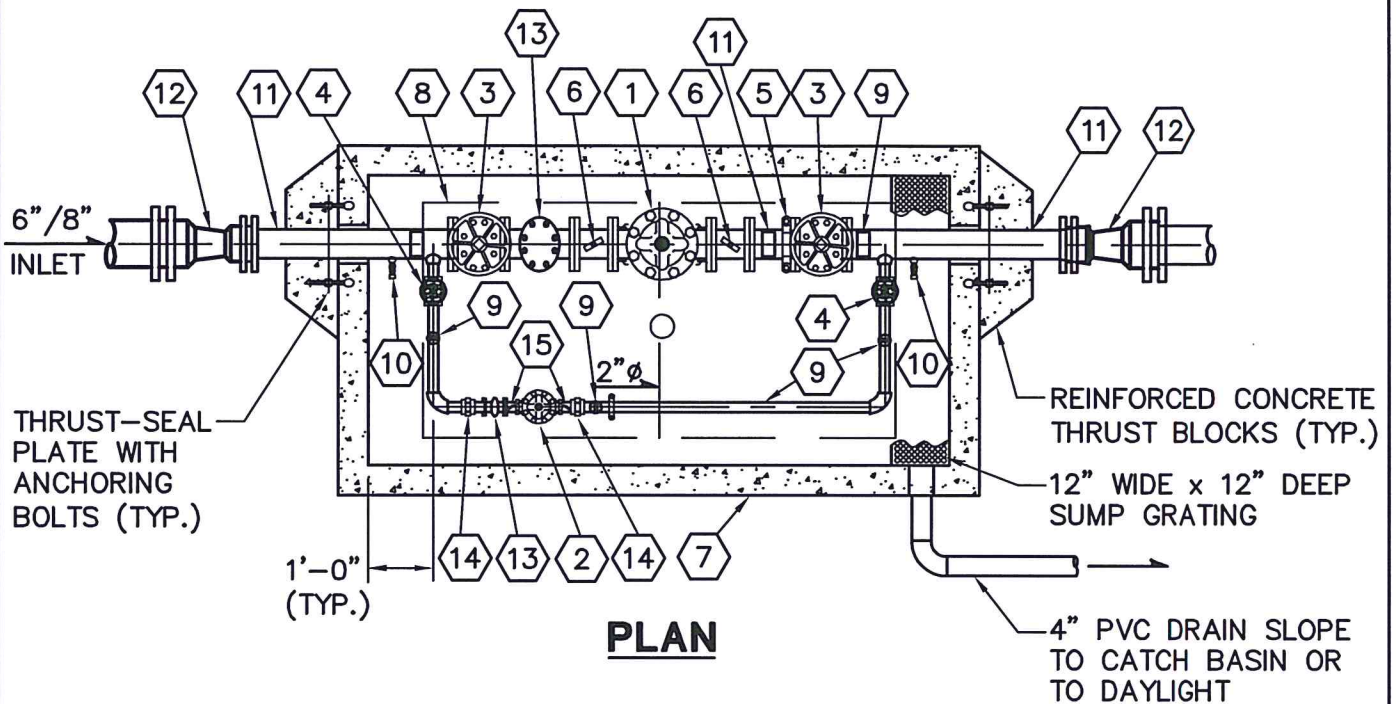
NOTES

1. THE NUMBER (2, 3, OR 4) AND CONFIGURATION OF THE GUARD POSTS SHALL BE DETERMINED BY THE CITY BASED ON FIELD CONDITIONS.
2. PAINT GUARD POSTS WITH TWO (2) COATS OF KELLY-MOORE 6100-516 YELLOW .

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W17
GUARD POST


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NOTE:

ALTERNATE TO FIELD ASSEMBLED PRV AND VAULT IS SYSTEM AS MANUFACTURED BY GC SYSTEMS.

(X) SEE V-W18B FOR CALLOUTS AND NOTES

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W18A
PRESSURE REDUCING VAULT


Gray & Osborne, Inc.
CONSULTING ENGINEERS

LEGEND - SEE V-W18A FOR PLAN AND SECTION

- ① 6" CLA-VAL 92G-01BCSY PRESSURE REDUCING VALVE WITH X101 POSITION INDICATOR DI BODY, S.S. TRIM, #150 FL.
- ② 2" CLA-VAL 90G-01BC PRESSURE REDUCING VALVE WITH X101 POSITION INDICATOR DI BODY, BRONZE TRIM - THREADED.
- ③ 6" D.I. RW NRS GATE VALVE WITH HANDWHEEL, #150 FL.
- ④ 2" MUELLER A2360-6W41 W55 RW NRS GATE VALVE WITH HANDWHEEL, THD.
- ⑤ UNIFLANGE
- ⑥ 4" 0-300 PSI PRESSURE GAUGE WITH SNUBBER AND GAUGE COCK. LOCATION SHALL BE AS SHOWN ON V-W18A ON THE TOP OF THE PIPE. GAUGE SHALL BE INSTALLED ON BOTH PRIMARY AND BYPASS PRV ASSEMBLIES (SEE ITEM 15 BELOW).
- ⑦ PRECAST CONCRETE VAULT 10'L x 5'W x 3'-7"H INSIDE, SOLID WALL WITH WHITE INTERIOR & BLACK EXTERIOR SEALANT
- ⑧ 48" X 96" DOUBLE DOOR ALUMINUM HATCH, LW PRODUCTS OR APPROVED EQUAL. H-20 RATED. DRAIN HATCH TO VAULT FLOOR.
- ⑨ ADJUSTABLE PIPE SUPPORTS
- ⑩ 3/4" HOSE BIB ASSEMBLY
- ⑪ PIPE SPOOL (FLxPE) LENGTH AS REQUIRED.
- ⑫ REDUCER (AS REQUIRED), MJ WITH MEGA-LUGS
- ⑬ WATER METER STRAINER, SENSUS OR APPROVED EQUAL.
- ⑭ UNIONS
- ⑮ 2" 0-300 PSI PRESSURE GAUGE WITH SNUBBER.

NOTES:

- 1. 6" x 2" PRV ASSEMBLY SHOWN. SIZES TO BE DETERMINED BY THE CITY BASED ON DOWNSTREAM DEMANDS.
- 2. ALL 3" AND LARGER PIPE INSIDE WETTED SURFACES TO BE SANDBLASTED, EPOXY LINED AND COATED TO AWWA C210 AND NSF-61 SPECIFICATION. EXTERIOR COATING SHALL BE BLUE ENAMEL.
- 3. ALL PIPE 2" AND SMALLER TO BE BRASS.

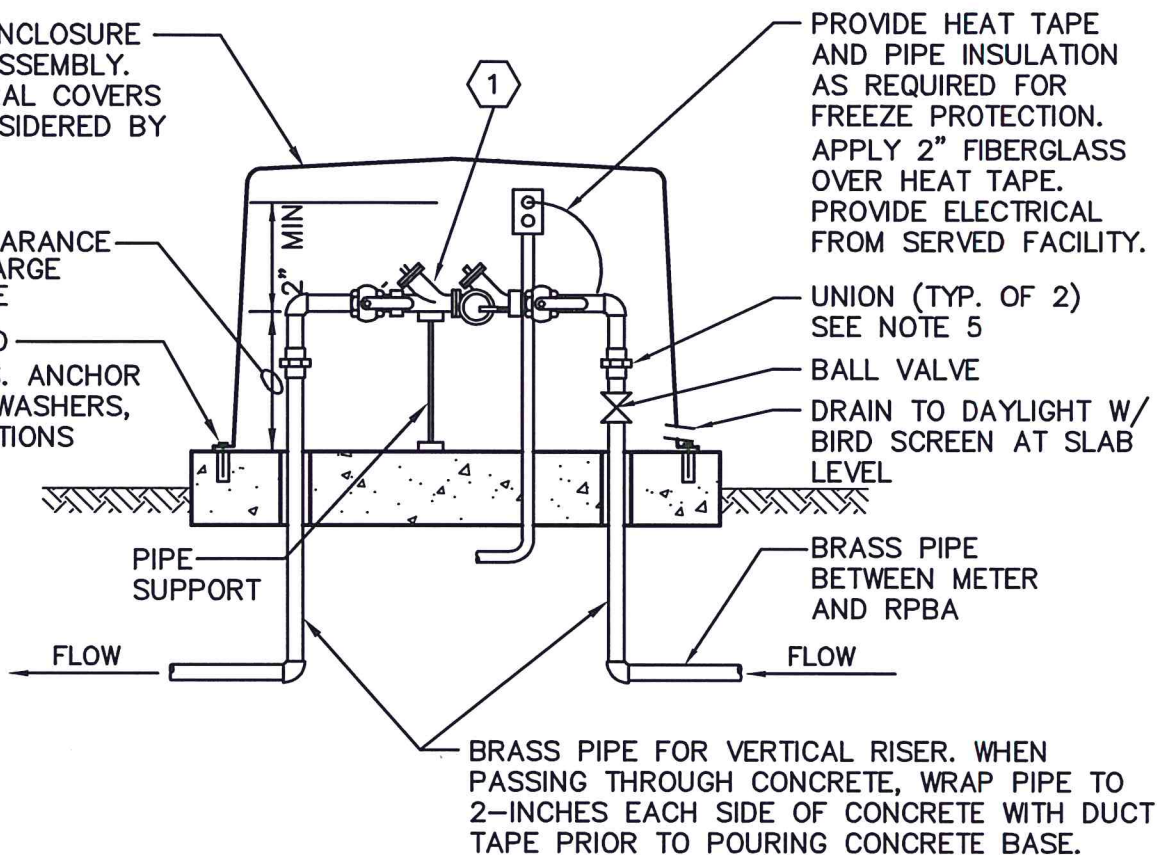
CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE W18B
PRESSURE REDUCING VAULT


Gray & Osborne, Inc.
CONSULTING ENGINEERS

INSULATED ENCLOSURE
SIZED FOR ASSEMBLY.
ARCHITECTURAL COVERS
WILL BE CONSIDERED BY
THE CITY.

12" MIN. CLEARANCE
FROM DISCHARGE
TO CONCRETE

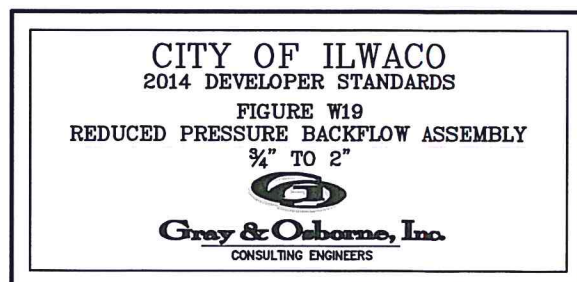
BOLT TO PAD
W/ 3/8" S.S. ANCHOR
BOLTS AND WASHERS,
MIN. 4 LOCATIONS

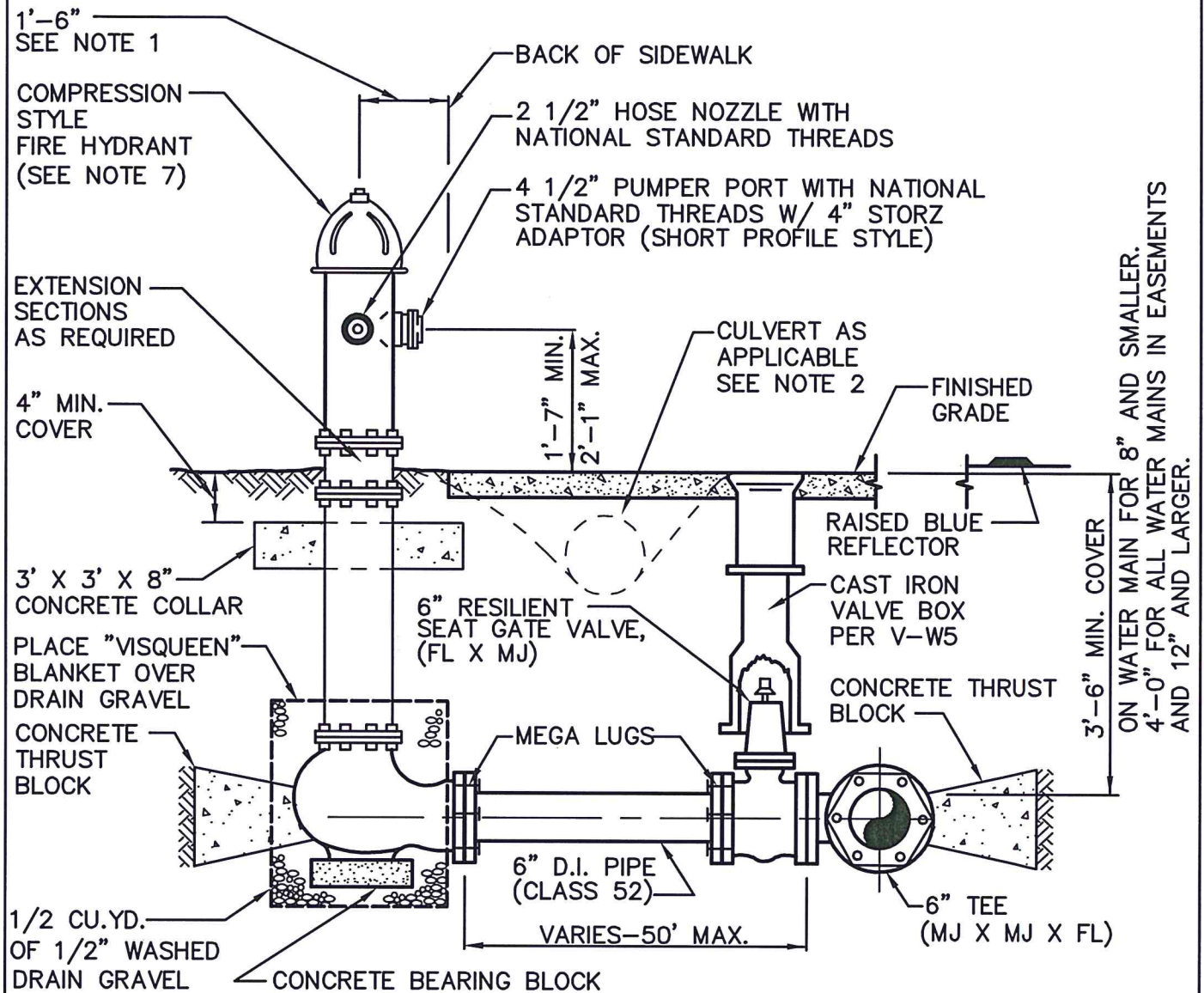


1 WASHINGTON STATE APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA)
WITH TEST COCK PROTECTION AND BRONZE BODY BALL VALVE AT EACH END.

NOTES:

1. CONCRETE TO BE 2500 PSI (MINIMUM) MIX WITH AIR ENTRAINMENT.
2. COMPLETE ALL WORK IN ACCORDANCE WITH STATE, CITY AND MANUFACTURER STANDARDS.
3. SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL RPBA IS APPROVED BY THE CITY AND TESTED/CERTIFIED BY A WASHINGTON STATE LICENSED TESTER.
4. RPBA IS CONSIDERED PART OF THE PRIVATE SYSTEM AND SHALL BE MAINTAINED BY THE PROPERTY OWNER WITH ANNUAL CERTIFICATION REQUIRED.
5. DIELECTRIC UNIONS SHALL BE USED TO SEPARATE DISSIMILAR MATERIALS.
6. NO BRANCH CONNECTIONS ALLOWED BETWEEN METER AND RPBA.

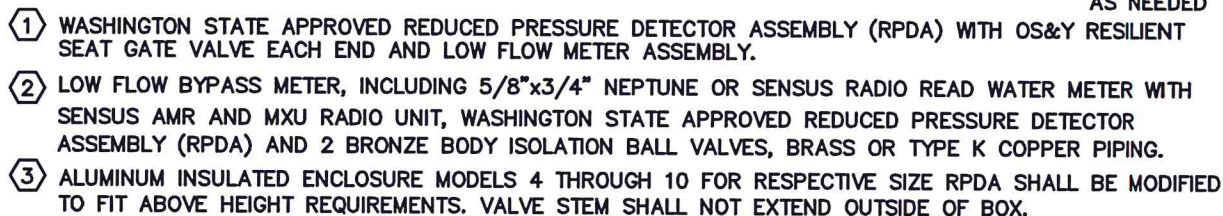




NOTES:

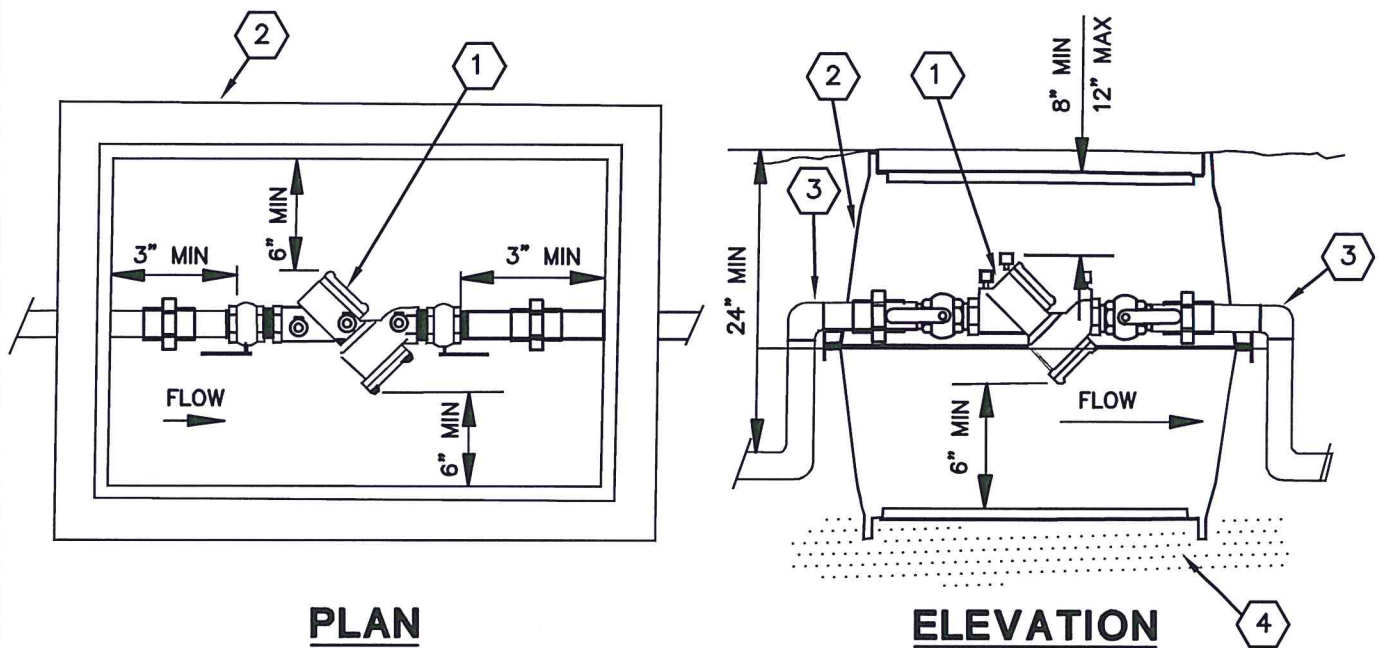
1. OR 3' FROM BACK OF CURB
2. PROVIDE 8' OF CULVERT AND COVER, 12" MIN. DIA. OR EQUAL IN SIZE TO ADJACENT DITCH CROSSINGS. PIPE TO COUNTY, STATE OR CITY STANDARDS AS APPLICABLE.
3. PROVIDE MIN. 3'-0" CLEARANCE AND LEVEL AREA AROUND HYDRANT
4. PAINT FIRE HYDRANT WITH TWO COATS KELLY MOORE 6100-516 YELLOW AND TOP OF HYDRANT COLOR DETERMINED BY SERVICE LEVEL GPM.
213 SAFETY BLUE-SERVICE LEVEL 1500 GPM OR GREATER
815 SAFETY GREEN-SERVICE LEVEL 1000 TO 1499 GPM
5. STENCIL FOOTAGE TO VALVE ON HYDRANT UNDER PORT FACING GV
6. REMOVE ALL CHAINS FOR FIRE HYDRANT CAPS
7. ACCEPTABLE HYDRANTS: CLOW MEDALLION OR MUELLER CENTURION.
8. INSTALL BLUE FIRE HYDRANT REFLECTOR. OFFSET 1 FOOT FROM ROAD CENTERLINE





1. INSULATED ENCLOSURE TO BE LOCATED OUTDOORS AND ACCESSIBLE TO CITY. ALTERNATE LOCATION REQUIRES CITY APPROVAL.
2. HEATERS AND WIRING SHALL BE RATED AT 2,000 WATT FOR 8" AND UNDER: 3,000 WATT FOR 10".
3. CONCRETE TO BE 2500 PSI (MINIMUM) MIX WITH AIR ENTRAINMENT.
4. COMPLETE ALL WORK IN ACCORDANCE WITH STATE, CITY AND MANUFACTURER STANDARDS.
5. SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL RPDA IS APPROVED BY THE CITY AND TESTED/CERTIFIED BY A WASHINGTON STATE LICENSED TESTER.
6. RPDA IS CONSIDERED PART OF THE PRIVATE SYSTEM AND SHALL BE MAINTAINED BY THE PROPERTY OWNER WITH ANNUAL CERTIFICATION REQUIRED.
7. DRAIN TO DAYLIGHT WITH BIRD SCREEN LOCATED AT SLAB LEVEL (SIZED PER MANUFACTURERS RECOMMENDATION).
8. NO BRANCH CONNECTIONS ALLOWED BETWEEN METER AND RPDA.

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CONSULTING ENGINEERS



- ① WASHINGTON STATE APPROVED DOUBLE CHECK VALVE ASSEMBLY (DCVA)
- ② METER BOX. BERG VAULT CO. OF WASH NO. 2 CONCRETE, OR MID STATES PLASTICS MSBCF 1730-12 COMPOSITE. BOX SHALL BE H-20 LOAD RATED WHERE REQUIRED.
- ③ BENDS MAY BE LOCATED INSIDE OR OUTSIDE OF BOX SO LONG AS SUFFICIENT ROOM IS ALLOWED AT EACH END FOR VALVE OPERATION AND DCVA REPAIR OR MAINTENANCE.
- ④ PROVIDE FREE DRAINING BACKFILL BELOW BOX. (12\"/>

NOTES:

- 1. ALL TEST COCKS SHALL POINT UPWARDS AND HAVE BRASS PLUGS.
- 2. DCVA SHALL BE CENTERED IN BOX (PLAN).
- 3. COMPLETE ALL WORK IN ACCORDANCE WITH STATE, CITY AND MANUFACTURER STANDARDS.
- 4. SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL DCVA IS APPROVED BY THE CITY AND TESTED/CERTIFIED BY A WASHINGTON STATE LICENSED TESTER.
- 5. DCVA IS CONSIDERED PART OF A PRIVATE SYSTEM AND SHALL BE MAINTAINED BY THE PROPERTY OWNER WITH ANNUAL CERTIFICATION REQUIRED.
- 6. INSTALL DCVA USING UNIONS ON EACH END OF ASSEMBLY. UNIONS TO BE EXPOSED INSIDE OF BOX.
- 7. BOTTOM OF BOX TO BE OPEN TO DRAIN.
- 8. NO BRANCH CONNECTIONS ALLOWED BETWEEN METER AND DCVA.

CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE W21
DOUBLE CHECK VALVE ASSEMBLY
2\"/>


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DOUBLE CHECK VALVES (TO MATCH PIPE DIAMETER) APPROVED IN WASHINGTON STATE, AND TESTED WITHIN 90 DAYS WHENEVER INSTALLED OR MOVED. PROVIDE CERTIFICATION TO CITY.

GALVANIZED PIPE

TIE CONNECTION ASSEMBLY TO EXISTING WATER MAIN HYDRANT OR BLOW-OFF VALVE

DISTANCE VARIES

NEW WATER MAIN

MIN. 2" FOR 8" MAINS, AND 4" FOR MAINS LARGER THAN 8"

CONCRETE THRUST BLOCK (TEMPORARY)

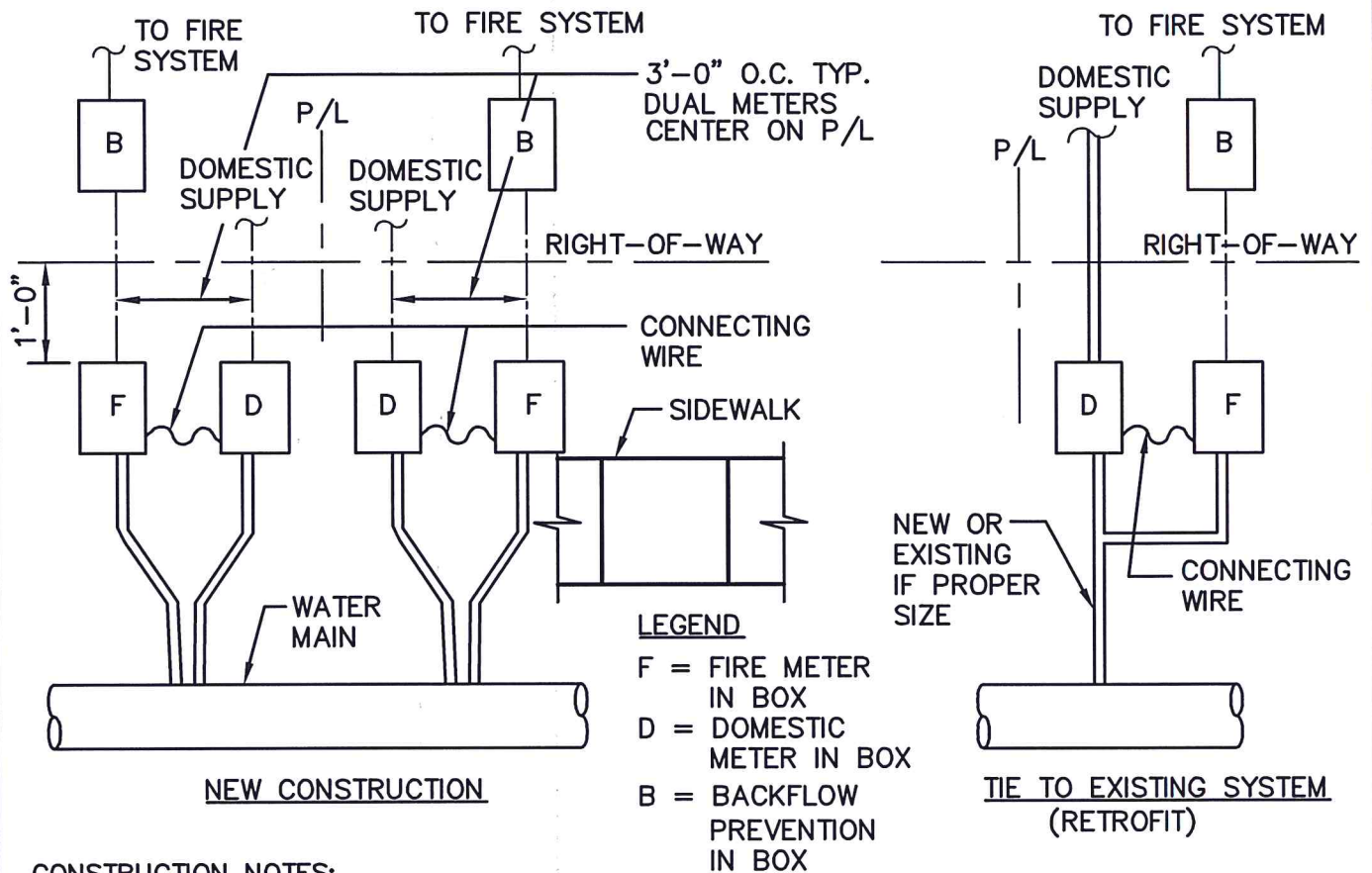
NOTES:

1. PROTECT INSTALLATION FROM DAMAGE AND FREEZING.
2. ALL WATER USED FOR FILLING AND FLUSHING SHALL BE METERED BY CITY. PROVIDE SPACE FOR INSTALLATION OF METER, OR INSTALL ON POINT OF DISCHARGE.
3. ALL NEW MAINS SHALL BE KEPT SEPARATE FROM THE CITY'S EXISTING SYSTEM UNTIL THE NEW MAINS ARE TESTED AND ACCEPTED. FINAL CONNECTION REQUIRES 100% INSPECTION BY THE CITY.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W22
TESTING CONNECTION DETAIL


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PROBABLE USE CONDITIONS:

1. WHERE BUILDING CODE REQUIRES.
2. IN RESIDENTIAL LOCATIONS WHERE:
 - a. ACCESS ROADS EXCEEDS 150 FT AND DOES NOT END IN CUL-DE-SAC OF 40 FOOT RADIUS MINIMUM.
 - b. ACCESS ROAD IS LESS THAN 20 FEET WIDE.
 - c. WATER SUPPLY ISSUES EXIST.



ROTATING
HANDWHEEL
OPERATOR

VARIABLE x 3/4"
MALE NPT BUSHING

PIPE SUPPORTS,
EVENLY SPACED AT
10" O.C.

GALVANIZED
FREEZEPROOF UTILITY
YARD HYDRANT, SIZE
AS REQUIRED

SUPPORT CONCRETE
WALL (IF APPLICABLE)

3'-0"

MINIMUM 3'
BURIAL DEPTH

8-INCH DEPTH TO
BOTTOM OF PEA
GRAVEL

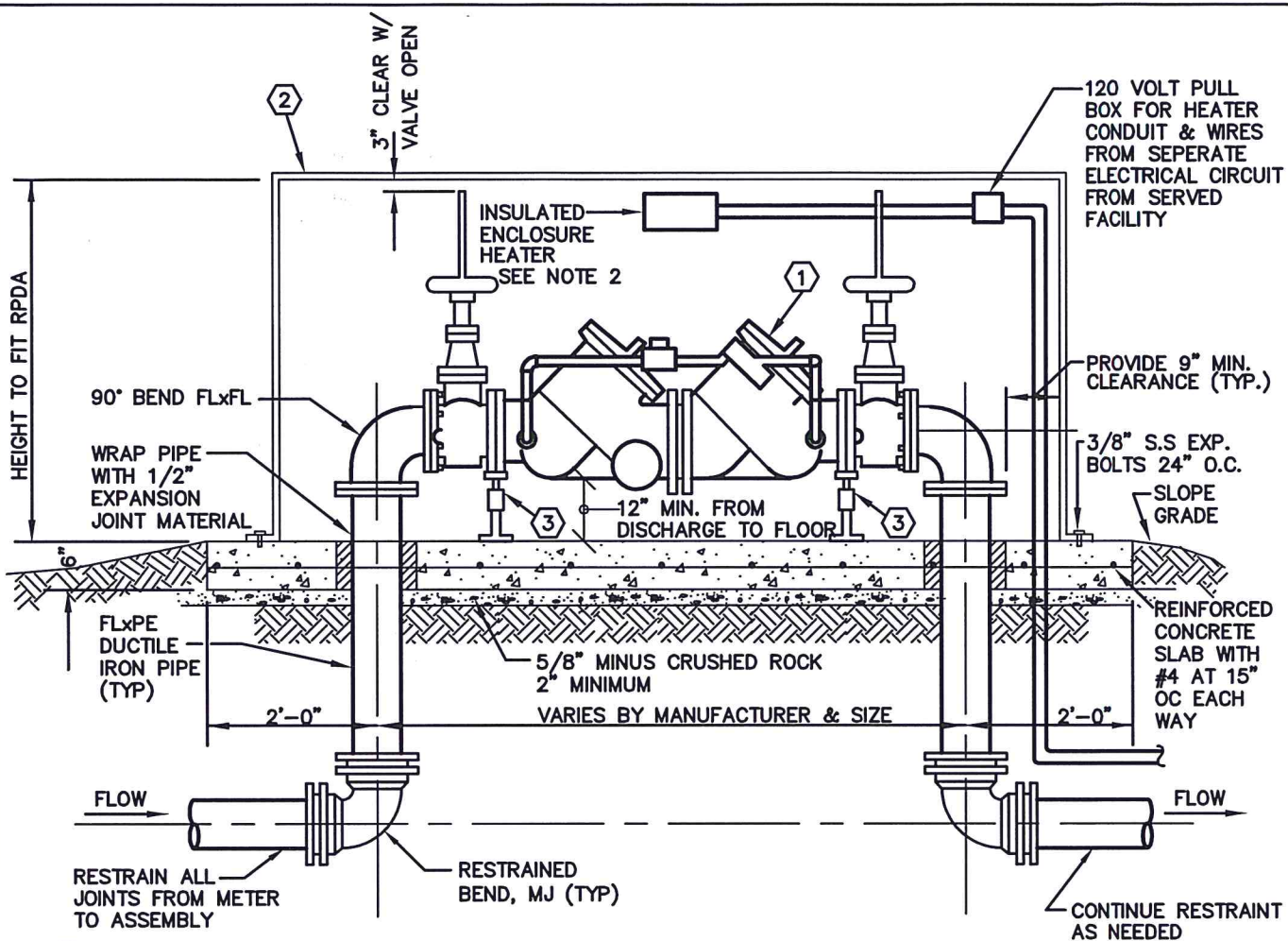
2 CU FEET
WASHED PEA
GRAVEL

FPT INLET, SIZE
AS REQUIRED

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W24
1" OR 2" NON-FREEZE YARD HYDRANT


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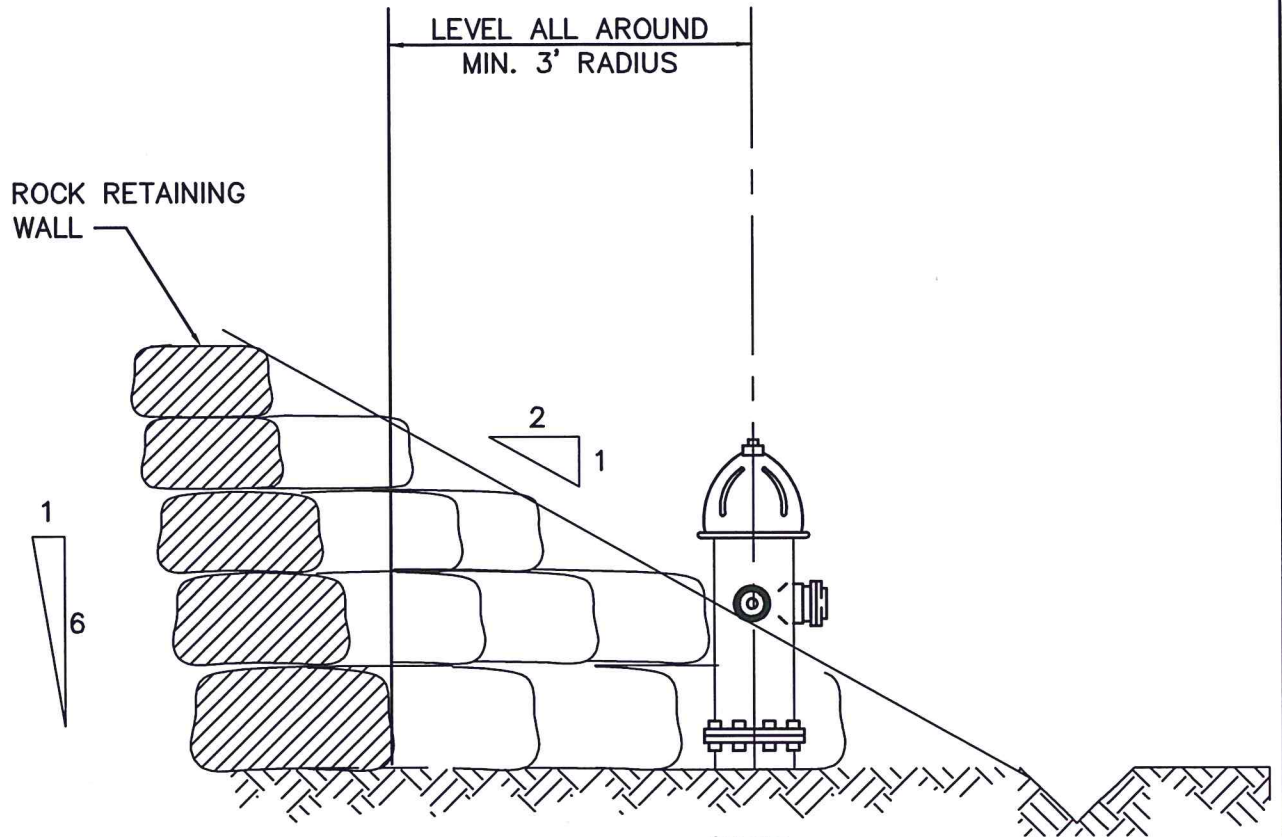
- ① WASHINGTON STATE APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) WITH OS&Y RESILIENT SEAT GATE VALVE EACH END.
- ② ALUMINUM OR FIBERGLASS INSULATED ENCLOSURE MODELS 4 THROUGH 10 FOR RESPECTIVE SIZE RPBA SHALL BE MODIFIED TO FIT ABOVE HEIGHT REQUIREMENTS. VALVE STEM SHALL NOT EXTEND OUTSIDE OF BOX.
- ③ STANDON S-89 OR EQUAL ADJUSTABLE PIPE SUPPORTS, BOLT TO VALVE FLANGE.

NOTES:

1. INSULATED ENCLOSURE TO BE LOCATED OUTDOORS AND ACCESSIBLE TO CITY. ALTERNATE LOCATION REQUIRES CITY APPROVAL.
2. HEATERS AND WIRING SHALL BE RATED AT 2,000 WATT FOR 8" AND UNDER: 3,000 WATT FOR 10".
3. CONCRETE TO BE 2500 PSI (MINIMUM) MIX WITH AIR ENTRAINMENT.
4. COMPLETE ALL WORK IN ACCORDANCE WITH STATE, CITY AND MANUFACTURER STANDARDS.
5. SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL RPDA IS APPROVED BY THE CITY AND TESTED/CERTIFIED BY A WASHINGTON STATE LICENSED TESTER.
6. RPBA IS CONSIDERED PART OF THE PRIVATE SYSTEM AND SHALL BE MAINTAINED BY THE PROPERTY OWNER WITH ANNUAL CERTIFICATION REQUIRED.
7. DRAIN TO DAYLIGHT WITH BIRD SCREEN LOCATED AT SLAB LEVEL (SIZED PER MANUFACTURERS RECOMMENDATION).
8. NO BRANCH CONNECTIONS ALLOWED BETWEEN METER AND RPBA.

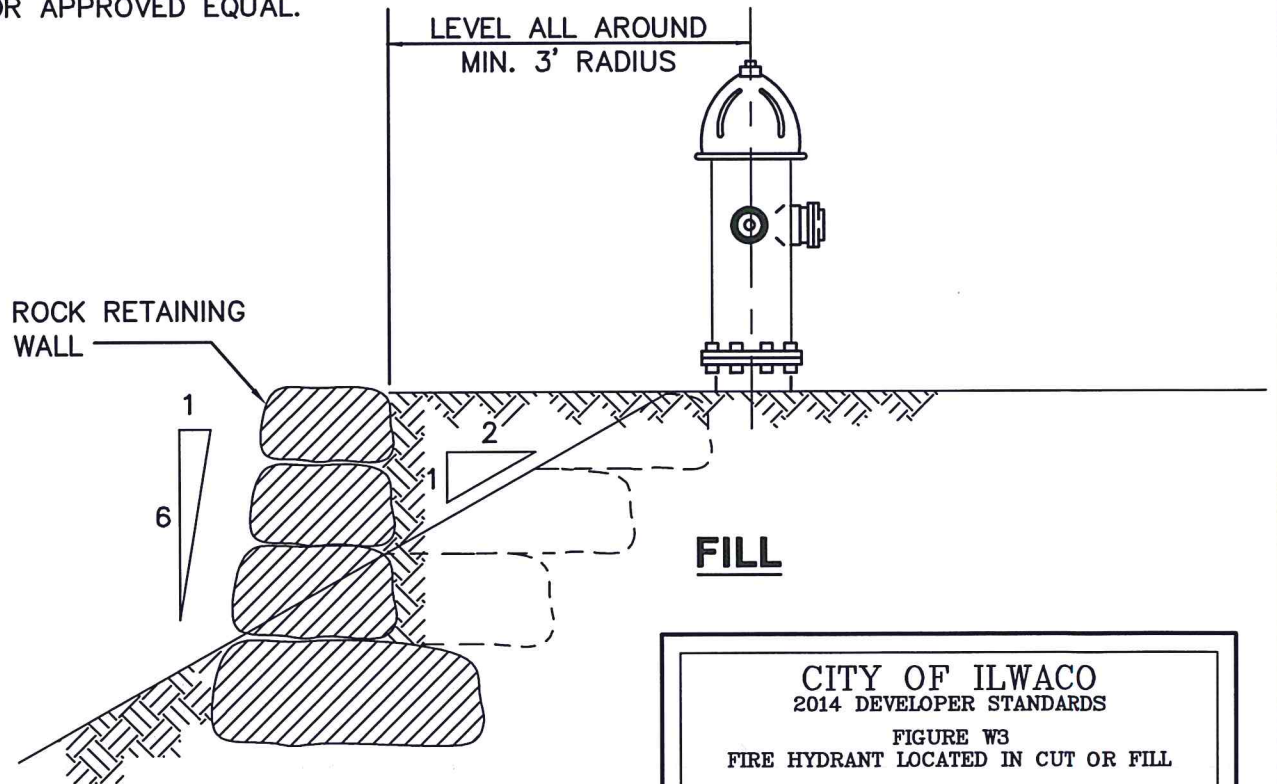
CITY OF ILWACO
2014 DEVELOPER STANDARDS
FIGURE W25
REDUCED PRESSURE BACKFLOW ASSEMBLY
2 1/2" AND LARGER


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NOTE: IN CUT BANK FIBERGLASS HILLSIDE BARRIERS CAN BE CONSIDERED. PROGLASS, INC. OR APPROVED EQUAL.

CUT



FILL

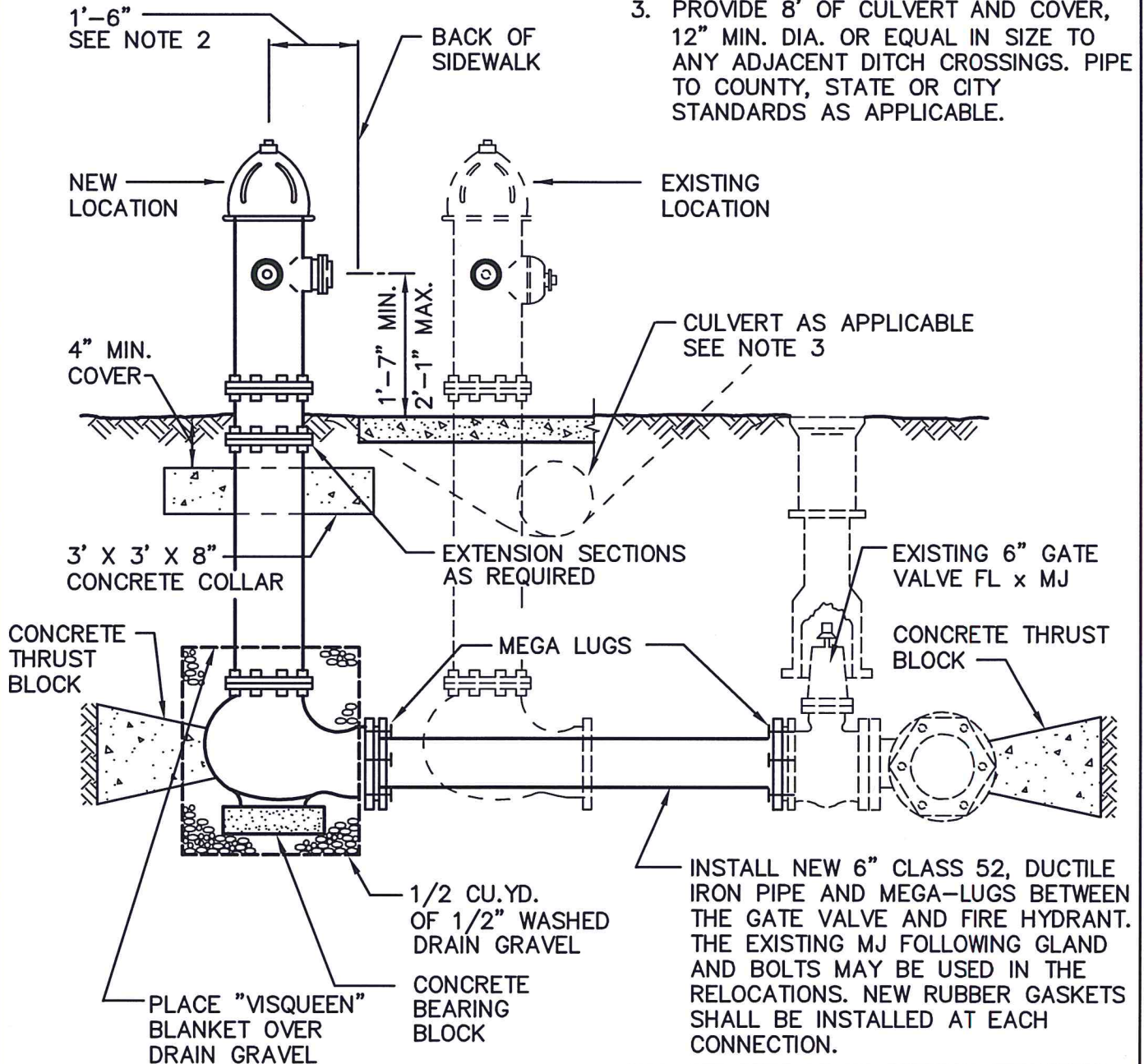
CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W3
FIRE HYDRANT LOCATED IN CUT OR FILL


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NOTES:

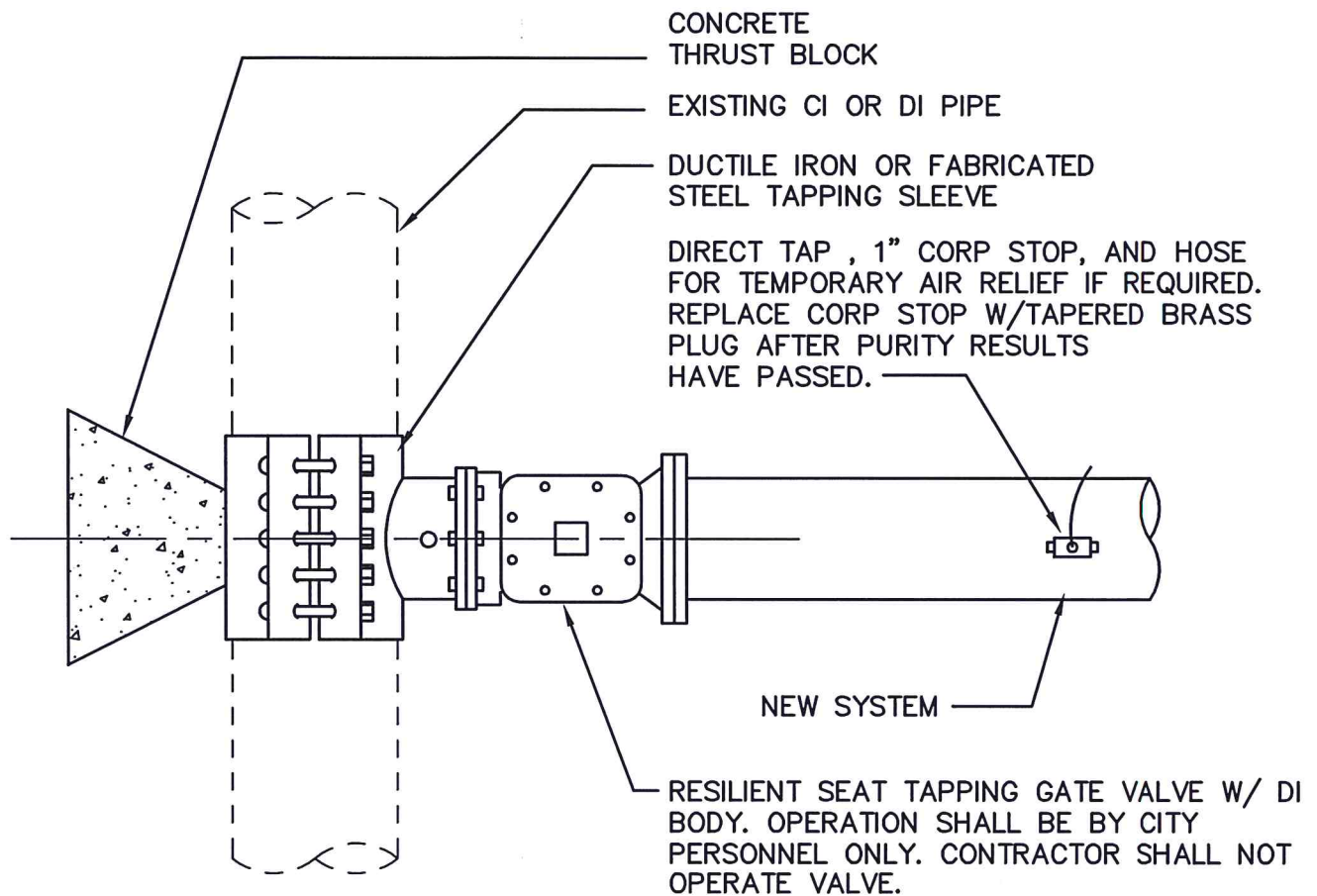
1. FIRE HYDRANT MUST MEET CITY REQUIREMENTS. FOR NEW HYDRANTS (SEE V-W2). REPLACE WITH NEW FIRE HYDRANT IF REQUIRED.
2. OR 3' FROM BACK OF CURB.
3. PROVIDE 8' OF CULVERT AND COVER, 12" MIN. DIA. OR EQUAL IN SIZE TO ANY ADJACENT DITCH CROSSINGS. PIPE TO COUNTY, STATE OR CITY STANDARDS AS APPLICABLE.



CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W4
RELOCATE FIRE HYDRANT ASSEMBLY


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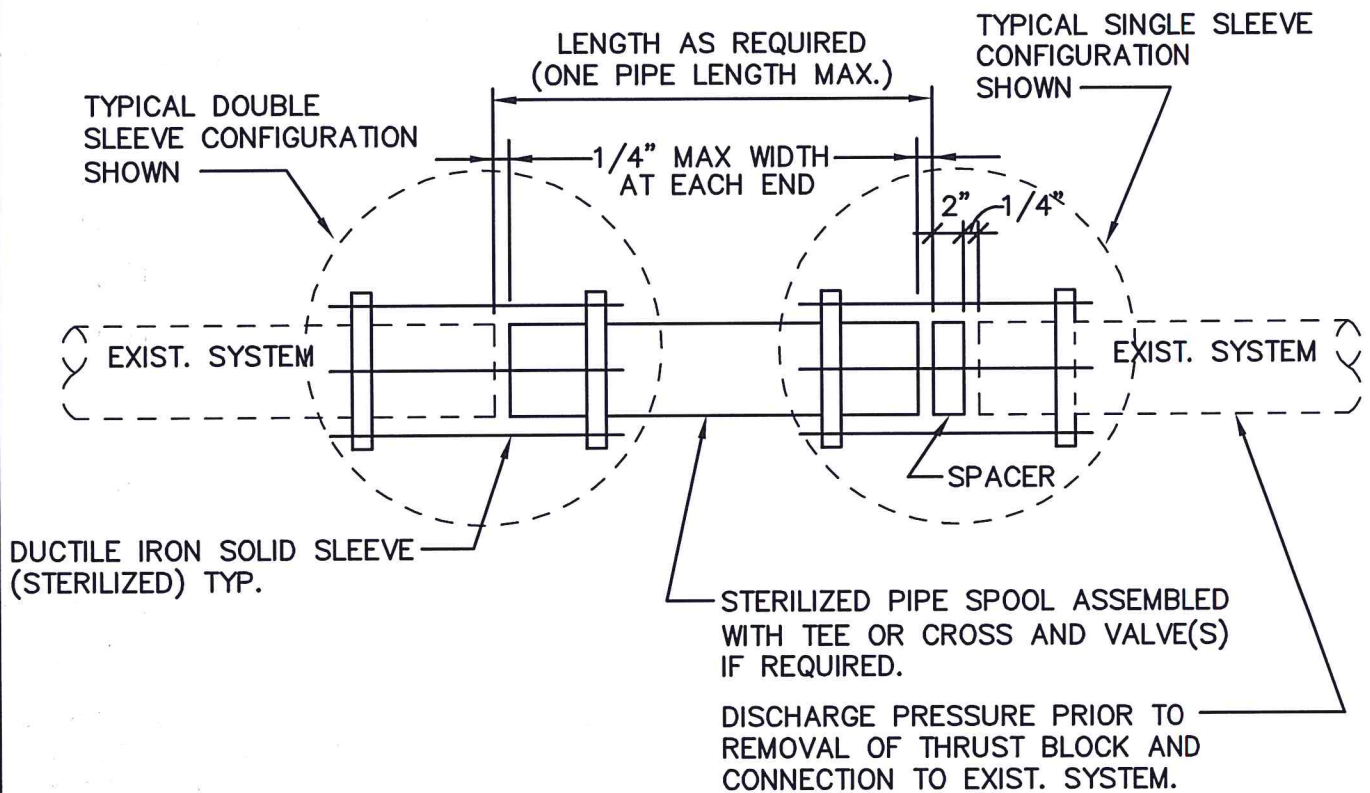
NOTES:

1. TAP TO BE INSTALLED AT DEVELOPERS EXPENSE UNDER CITY OBSERVATION.
2. SIZE-ON-SIZE TAPPING TEES SHALL BE DUCTILE IRON MECHANICAL SLEEVE.
3. STEEL TAPPING TEES SHALL BE AT LEAST 2" SMALLER IN DIAMETER THAN THE EXISTING WATER MAIN AND SHALL BE EPOXY COATED.
4. TAPPING TEES SHALL BE AIR PRESSURE TESTED TO 100 PSI PRIOR TO TAPPING MAIN.
5. CONNECTIONS NOT ALLOWED ON FRIDAYS, SATURDAYS, SUNDAYS, HOLIDAYS, OR DAYS BEFORE HOLIDAYS.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W5
WET TAP COPNNECTION


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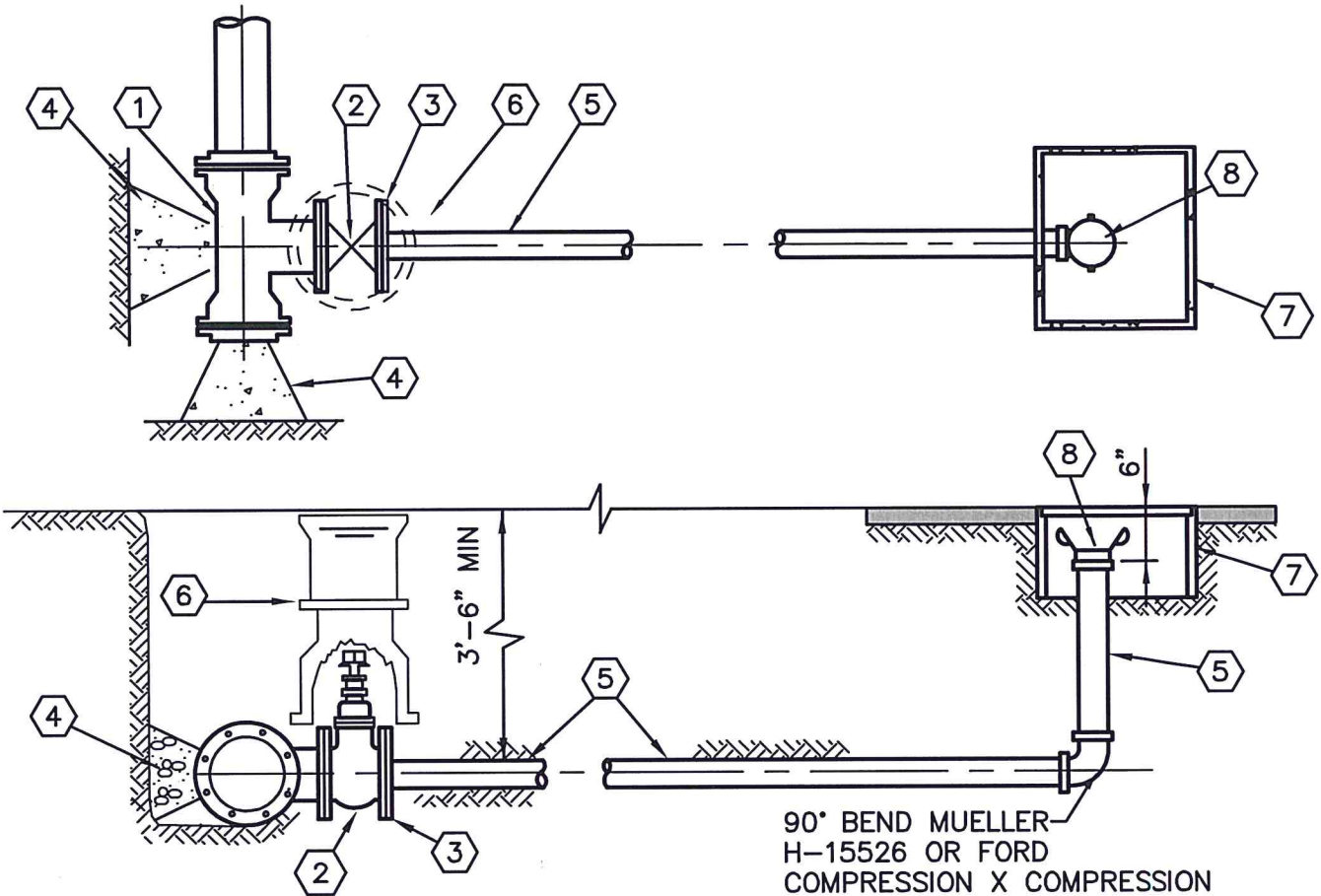
NOTES:

1. IN-LINE VALVE(S) IN EXISTING SYSTEM MAY BE REQUIRED BY THE CITY AT NEW INTERTIE LOCATIONS. VALVE(S) ARE NOT SHOWN ABOVE FOR CLARITY.
2. MAXIMUM SPACES BETWEEN PIPES SHALL BE 1/4-INCH. IF A SINGLE SLEEVE IS USED, THE MAXIMUM SPACER WIDTH IS 2-INCHES.
3. CONNECTIONS NOT ALLOWED ON FRIDAYS, SATURDAYS, SUNDAYS, HOLIDAYS, OR DAYS BEFORE HOLIDAYS.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W6
CUT IN CONNECTION


Gray & Osborne, Inc.
CONSULTING ENGINEERS



- ① MJ X MJ X 4" FL D.I. TEE.
- ② 4" AWWA RESILIENT SEAT GATE VALVE, FL X FL, WITH OPERATING NUT.
- ③ 4" BLIND FLANGE, TAPPED FOR 2" FOR 6" AND 8" MAINS. MAINS LARGER THAN 8" SHALL END IN A FIRE HYDRANT.
- ④ CONCRETE THRUST BLOCK.
- ⑤ 2" TYPE K COPPER PIPE.
- ⑥ CAST IRON VALVE BOX PER V-W14.
- ⑦ METER BOX. BERG VAULT CO. OF WASH NO. 2 CONCRETE OR MID STATES PLASTICS MSBCF 1324-12Z COMPOSITE. BOX SHALL BE H-20 LOAD RATED WHERE REQUIRED. (FIELD LOCATION TO BE IN PAVED SURFACE UNLESS CITY APPROVES ALTERNATE LOCATION.)
- ⑧ ALUMINUM CAM-LOCK AND CAP. DRILL 1/8" HOLE IN CAP. (PLASTIC CAM LOCK FITTING NOT ALLOWED)

NOTES

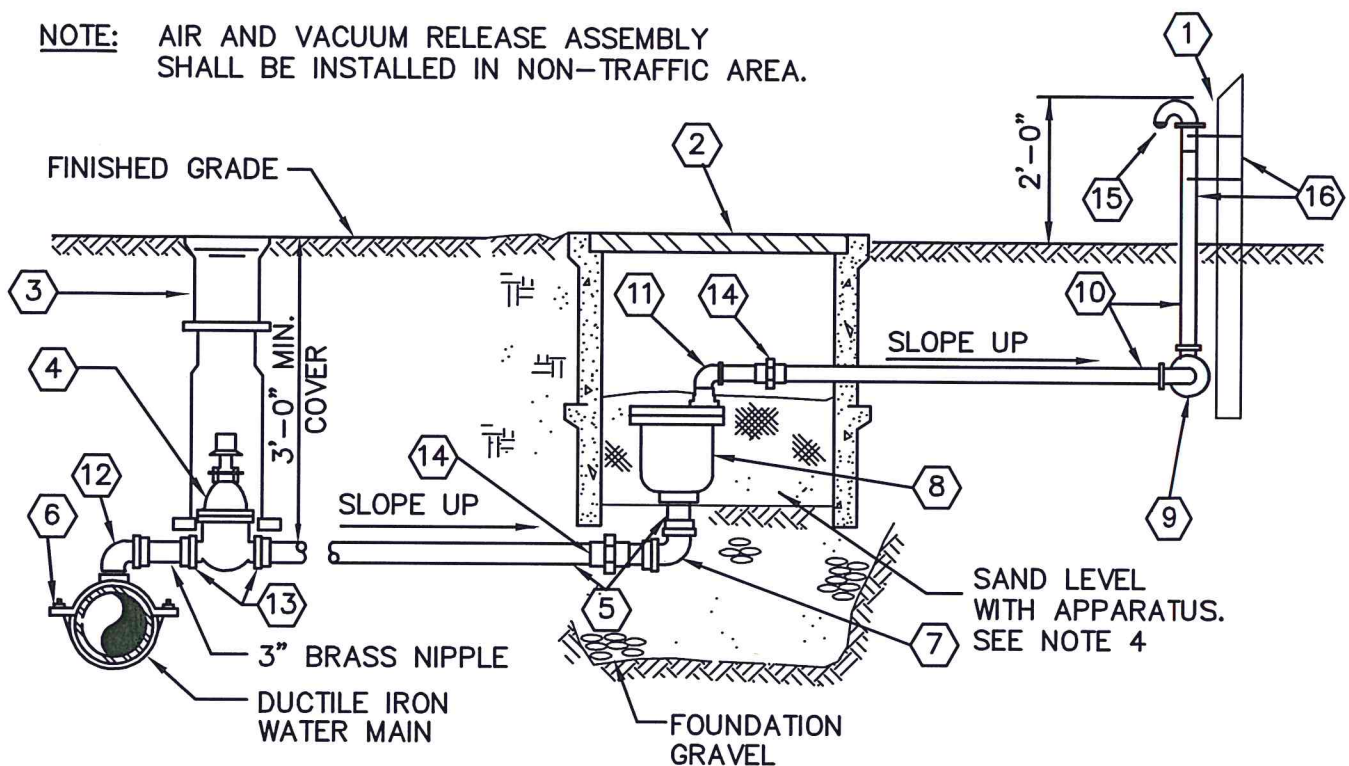
- 1. INSTALL DIELECTRIC COMPOUNDS FOR SEPARATION AT DISSIMILAR METALS.

CITY OF ILWACO
2014 DEVELOPER STANDARDS

FIGURE W7
BLOW OFF ASSEMBLY


Gray & Osborne, Inc.
CONSULTING ENGINEERS

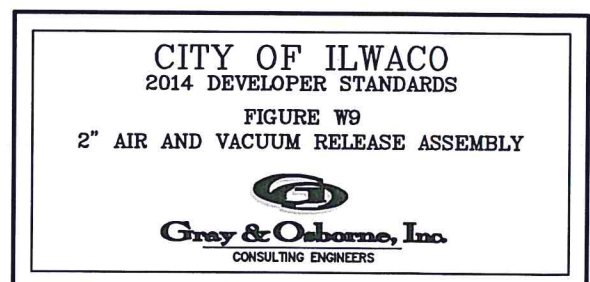
NOTE: AIR AND VACUUM RELEASE ASSEMBLY SHALL BE INSTALLED IN NON-TRAFFIC AREA.



- | | |
|--|--|
| 1 CONC. VALVE MARKER POST | 9 2, 2"X90° ELL, GALV. |
| 2 METER BOX. BERG VAULT CO. OF WASH NO.2 CONCRETE OR MID STATES PLASTICS MSBCF 1730-12 COMPOSITE. BOX SHALL BE H-20 LOAD RATED WHERE REQUIRED. | 10 2" GALV. IRON PIPE (FIELD LOCATE NEXT TO EXISTING PROPERTY LINE). |
| 3 CAST IRON VALVE BOX PER V-W5 | 11 2"X90° ELL, GALV. |
| 4 2" AWWA RESILIENT SEAT GATE VALVE THD X THD, WITH OPERATING NUT | 12 90° BEND MUELLER No. H-10096 FEMALE X M.I.P. |
| 5 2" TYPE "K" COPPER TUBING | 13 STRAIGHT COUPLING, MUELLER No. H-15428 COMPRESSION TO M.I.P. |
| 6 DOUBLE STRAP SERVICE CLAMP | 14 UNIONS |
| 7 90° BEND MUELLER No. H-15526 COMPRESSION X COMPRESSION | 15 2" OPEN PATTERN RETURN BEND WITH 2" BEEHIVE STRAINER |
| 8 2" COMBINATION AIR & VACUUM RELEASE ASSEMBLY; A. APCO MODEL 145C.
B. CRISPIN MODEL UL 20 SERIES.
C. VALMATIC | 16 PAINT EXPOSED PORTION OF VENT PIPE AND MARKER POST WITH TWO COATS OF KELLY MOORE 6100-516 YELLOW. SECURE VENT TO POST WITH SS BANDS |

NOTES:

1. ALL PIPING AND FITTINGS BETWEEN DOUBLE STRAP SADDLE AND INLET SIDE OF COMBINATION AIR AND VACUUM ASSEMBLY SHALL BE COPPER OR BRASS.
2. TAP WATER MAIN AT HIGH POINT AT LOCATION TO BE DETERMINED BY THE CITY.
3. AIR VAC ASSEMBLY TO BE CONNECTED USING HORIZONTALLY PLACED UNIONS AT EACH END OF AIR VAC ASSEMBLY (MATCH PIPE MATERIAL)
4. SAND SHALL BE WASHED SAND AS SPECIFIED IN CITY SPECIFICATIONS SECTION 11.4 - AGGREGATE MATERIALS.



CITY OF ILWACO CITY COUNCIL AGENDA ITEM BRIEFING

- A. Meeting Dates: Council Workshop: Public Hearing: 9/22/14
 Council Discussion Item: 9/8/14 Council Business Item:
- B. Issue/Topic: **Application for Economic Opportunity Grant for Port of Ilwaco Cold Storage Project**
- C. Sponsor(s):
 1. Mike Cassinelli 2.
- D. Background (overview of why issue is before council):
1. The Port of Ilwaco is collaborating with Ilwaco Fish Company on a LEED Certified, publicly accessible, cold storage facility in order to expand seafood business opportunities, create new jobs, help revitalize the Port, and contribute to the economic development of Pacific County, the Long Beach Peninsula, and the Ilwaco community. The project manager working on the collaboration has been working on an overall funding proposal for the entire project and has approached the City regarding the Washington State Department of Commerce's Economic Opportunity Grant. While the Port of Ilwaco is eligible to apply for funding from the Community Economic Revitalization Board of the Washington State Department of Commerce (DOC), they are not eligible to directly apply to the DOC for an Economic Opportunity Grant (EOG) through the Community Development Block Grant program. The City of Ilwaco is eligible to apply for an EOG and the Port of Ilwaco is eligible to be a sub-recipient of an EOG.
 2. Kaaren Roe at the Department of Commerce is aware of the project and believes it is a good fit for the Community Development Block Grant program. Cities and towns of less than 50,000 people are eligible applicants for an Economic Opportunity Grant. The grants are for activities that grow economies, promote vibrant rural communities and result in sustainable infrastructure. The highest priority is to fund economic development and energy efficiency activities.
 3. If awarded, the Port of Ilwaco, as sub-recipient, would be responsible for overseeing the project and meeting the requirements of the Economic Opportunity Grant. The City would have oversight over the Port regarding the grant compliance.
- E. Discussion (specific details relevant to the issue, pros/cons, alternatives and any other decision-making details)
1. To apply for the grant, the city must hold a public hearing. The public hearing has been scheduled for the next regular council meeting on September 22nd. The City must pass a resolution authorizing the grant application to be submitted. The project proposal has been drafted. The drafted grant application will be available prior to the next council meeting. A more detailed overview of the project and funding possibilities provided by the project manager is included with this briefing as well as a sample of the resolution that would be passed.

F. Impacts:

1. Fiscal:
2. Legal:
3. Personnel: Staff time will be required to oversee grant compliance.
4. Service/Delivery: n/a

G. Planning Commission: ☐ Recommended ☒ N/A ☐ Public Hearing on

H. Staff Comments:

1. None

I. Time Constraints/Due Dates: Economic Opportunity Grant funds are on a first come, first served basis.

J. Proposed Motion: I move to adopt the resolution authorizing submittal of an application for grant funding to the Washington State Department of Commerce Community Development Block Grant program for an Economic Opportunity Grant.

Information on Economic Opportunity Grant: new Cold Storage and Seafood Processing Facility
Ilwaco, Washington (2014 – 2016)

Potential collaboration between the City of Ilwaco and the Port of Ilwaco with the Ilwaco Fish Company

Project Description

The Port of Ilwaco and the Ilwaco Fish Company (IFC) are seeking to develop a new-built, publicly accessible, LEED Certified cold storage facility in order to expand seafood business opportunities, create new jobs, help revitalize the Port, and contribute to the economic development of Pacific County, the Long Beach Peninsula and the community of Ilwaco. The facility will provide expanded seafood processing space for IFC and chilled storage for four food banks in the Long Beach Peninsula area. IFC is major processor of whiting, albacore tuna, Dungeness crab, sardines, and salmon.

The facility will be approximately 70,000 sq.ft. in total; 50,000 sq.ft. as cold storage and 20,000 sq.ft. in processing and office space. The design of the facility intends to utilize an innovative CO2 refrigeration system, super insulated construction, advanced LED lighting, solar energy, and innovative water management among other 'green building' features. CO2 refrigeration systems limit the use of typical refrigerants (ammonia) and provide greater public safety.

Ilwaco Fish Company will be the principal lessee and operator of the facility. In addition, the cold storage space will be available to other public users, primarily from the fisheries/seafood sector. There will be adequate, separate chilled storage space for local food banks. It is unlikely that the cranberry sector, another key local industry sector, will use the facility due to quality control (odor transfer) issues and seasonal requirements. The management of IFC has in-depth experience in the development and management of cold storage facilities.

The project is exploring the use of a 'project specific LLC' to issue industrial revenue bonds, use state tax credits, and other innovative financing (New Markets Tax Credits, philanthropic Program Related Investments – PRI) to fund the project.

The project site is owned by the Port of Ilwaco and is immediately adjacent to existing processing facilities of the Ilwaco Fish Company (see the attached figure).

The completed facility will generate an estimated 100 new jobs, 25 jobs in cold storage and 75 jobs in seafood processing. In addition, IFC will save substantial sums and reduce its carbon footprint by eliminating truck transportation to cold storage facilities in the Willamette Valley, currently the closest facilities to Ilwaco. The facility would further enhance the existing facilities operated by the Port of Ilwaco and would improve the economic base of the surrounding rural coastal communities.

The intention is to complete the facility by July 2016.

Economic Opportunity Grant

A grant of up to \$1 million is available from the State of Washington Community Development Block Grant program, via the Economic Opportunity Grant (EOG) sector. The City of Ilwaco would be the eligible applicant for these funds. The Port of Ilwaco would need to be the sub-recipient with the city having fiscal oversight on the use of the grant funds.

The overall project cost is estimated at this time to be approximately \$12 million dollars. Project funds are expected to include \$2.3 million in loan and grant funds from the Community Economic Revitalization Board (CERB), approximately \$8.6 million in bond or other private debt; thus a \$1 million EOG grant is a significant and needed component of project funding.

IFC is providing substantial soft costs (May - November 2014) to initiate the project, in excess of \$150,000 to date - end of September 2014). IFC is utilizing the subsidized services of the Bonneville Power Administration's Energy Smart Industrial program (valued at \$25,000) to assess the efficiency upgrades, energy and cost savings in the refrigeration systems for the facility. Energy conservation rebates may contribute approximately \$100,000 to the project.

The project is also exploring the use of New Markets Tax Credits, and if successful, this Economic Opportunity Grant via the City of Ilwaco could be a part of the capital mix required for the overall cold storage and seafood processing facility project. The Port of Ilwaco will be applying for grant and loan funds from the Community Economic Revitalization Board (CERB).

After a review of the program requirements, it appears that the project will qualify and will generate sufficient numbers of jobs that would benefit persons of low or moderate income (LMI). The cold storage and processing facility will be used not only by Ilwaco Fish Company, but will resolve the lack of storage for the four local food banks.

Two discussions with CDBG program staff indicate that the project is a great fit for the Economic Opportunity grant. The amount of the award does not appear to be limited at \$1 million. The City could request up to \$35,000 per job created. \$35,000 times 50 jobs would be \$1,750,000. The grant would require that 51% of the jobs created would benefit Low to Moderate Income individuals. The award would be limited by what they feel makes the project affordable. Staff suggested that a \$1 million dollar award would make sense.

The use of funds is fairly flexible. If they are used on construction or equipment installation, Davis Bacon requirements would apply; however, the funds can be used as working capital, project manager costs, NEPA review, and so forth. The grant can only fund costs incurred after time of award.

The project site is not within the floodplain and it not subject to State of Washington JARPA permit requirements. However the project is subject to a SEPA/NEPA review.

A public hearing process is required. If initially approved by the City Council, there are some additional measures that must be taken, including a 'Resolution with Certifications of Compliance' with the CDBG program requirements.

We expect to provide a draft of the proposal to the Council by the 18th of September.

Full EOG grant application information can be found at:

<http://www.commerce.wa.gov/Documents/CDBG-EO-Application-Handbook-2013-2014-Final.docx>

The project is being managed for the Port of Ilwaco and Ilwaco Fish Company by Collaborative Fisheries Associates, LLC. Please contact Edward Backus for further information: 503 939 5500 (mobile) or ehbackus@gmail.com.

SAMPLE RESOLUTION WITH CERTIFICATIONS OF COMPLIANCE

WHEREAS, (Insert name of city, town, or county here) is applying to the state Department of Commerce for a Community Development Block Grant (CDBG);

WHEREAS, it is necessary that certain conditions be met as part of the CDBG application requirements;

WHEREAS, (Insert the name of chief administrative official and title here) is authorized to submit this application to the State of Washington on behalf of (name of city, town, or county);

NOW, THEREFORE, be it resolved that the (Insert the name of city, town, or county here) authorizes submission of this CDBG application to the state Department of Commerce to request \$ (amount of funding requested) to (project description), and certifies that, if funded, it:

Will comply with applicable provisions of Title I of the Housing and Community Development Act of 1974, as amended, and other applicable state and federal laws;

Has provided and will provide opportunities for citizen participation that satisfy the CDBG requirements of 24 CFR 570.486;

Has provided technical assistance to citizens and groups representative of low- and moderate-income persons that request assistance in developing proposals;

Will provide opportunities for citizens to review and comment on proposed changes in the funded project and program performance;

Will not use assessments against properties owned and occupied by low- and moderate-income persons or charge user fees to recover the capital costs of CDBG-funded public improvements from low- and moderate-income owner-occupants;

Will establish a plan to minimize displacement as a result of activities assisted with CDBG funds; and assist persons actually displaced as a result of such activities, as provided in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended;

Has adopted or will adopt a policy(s) to reduce greenhouse gas emissions in accordance with RCW 70.235.070 and certifies this project will adhere to this policy(s);

Will conduct and administer its program in conformance with Title VI of the Civil Rights Act of 1964 and the Fair Housing Act; will affirmatively further fair housing (Title VIII of the Civil Rights Act of 1968); has adopted (or will adopt) and enforce a policy prohibiting the use of excessive force by law enforcement agencies within its jurisdiction against any individuals engaged in nonviolent civil rights demonstrations; and has adopted (or will adopt) and implement a policy of enforcing applicable state and local laws against physically barring entrance to or exit from a facility or location that is the subject of such nonviolent civil rights demonstration within its jurisdiction, in accordance with Section 104(1) of the Title I of the Housing and Community Development Act of 1974, as amended; and

(Insert name of city, town, or county here) designates (Insert name of city manager, county administrator, mayor here) as the authorized Chief Administrative Official and the authorized representative to act in all official matters in connection with this application and (Insert the name of city, town or county here)'s participation in the State of Washington CDBG Program.

Signature _____ Date _____

Name _____ Title _____

Attested _____ Date _____

